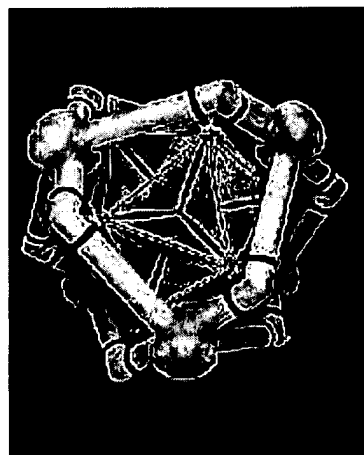


# Exoatmospheric Target/Decoy

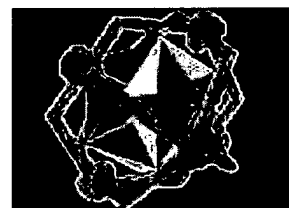


## Strategic Defense Command Rocket Launched Dodecahedron Radar Reflector

- 6 ft Nickel Coated Fabric Corner Reflectors Maximize Radar Return
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- Panel Accuracy to  $\pm 0.5^\circ$  of  $90^\circ$  on All Panels
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Send comments to: David W. Wilquet [wilqud@ilcdover.usa.com](mailto:wilqud@ilcdover.usa.com)  
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Revised: July 30, 1997

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## PPS Portable, Inflatable Decontamination Showers

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Portable Inflatable Decon Shower

**- DPI SHOWER SYSTEM**

**- DPI X2 (double the DPI)**

As featured on the ABC National News October 16th, 2001 v Jennings.

The Plychem DPI shower system is a highly effective priced decontamination shower system that can be transported and rapidly deployed to cope with dec personnel wherever it is required.

**[CLICK HERE FOR DPI OPERATING / MAINTENANCE MANUAL](#)**

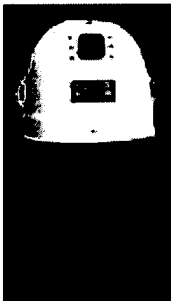
**- DECAS CASUALTY SYSTEM**    **- DECAS X2 CASUALTY SYSTEM**

The Plychem DECAS-W shower system is a cost effective inflatable shower system designed for decontaminating stretcher - bound or walking casualties. DECAS-W is used by casualty staff using the two hand held low flow, low pressure shower hoses to achieve gentle, local decontamination of casualty prior to injury treatment. DECAS-W can be deployed close to the incident or Hospital A&E department avoiding the spread of any contamination into other areas.



### Products

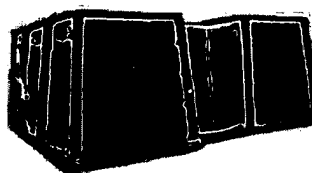
### Will Cool



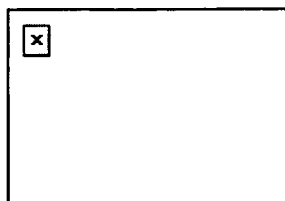
Nature's Air  
Conditioner -32°  
Completely Portable.  
12v Air Conditioner

☒ Decas Plysu Decon  
Hazmat Shower  
Shelter Portable  
Plysu

### **[DECAS v2 CASUALTY SYSTEM](#)**

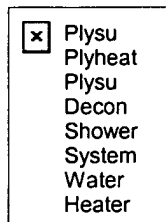


**DECAS v3 CASUALTY SYSTEM**  
**DECAS v3d CASUALTY SYSTEM**



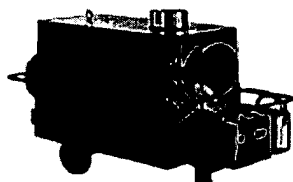
**DECAS US CASUALTY SYSTEM**

A triple unit, which consists of a total of 6 cubicles connecting tunnels.



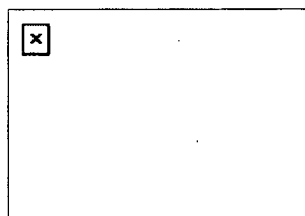
Plysu  
 Plyheat  
 Plysu  
 Decon  
 Shower  
 System  
 Water  
 Heater

**PLYHEAT WATER HEATING SYSTEMS, DETERGENT  
 INDUCERS AND WASTE PUMPS**

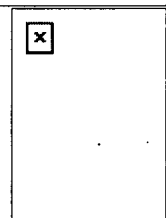


**FSI #F-HS CLEAN AIR HEATER**

Heavy Duty Portable, Ductable Indirect Fired Air H



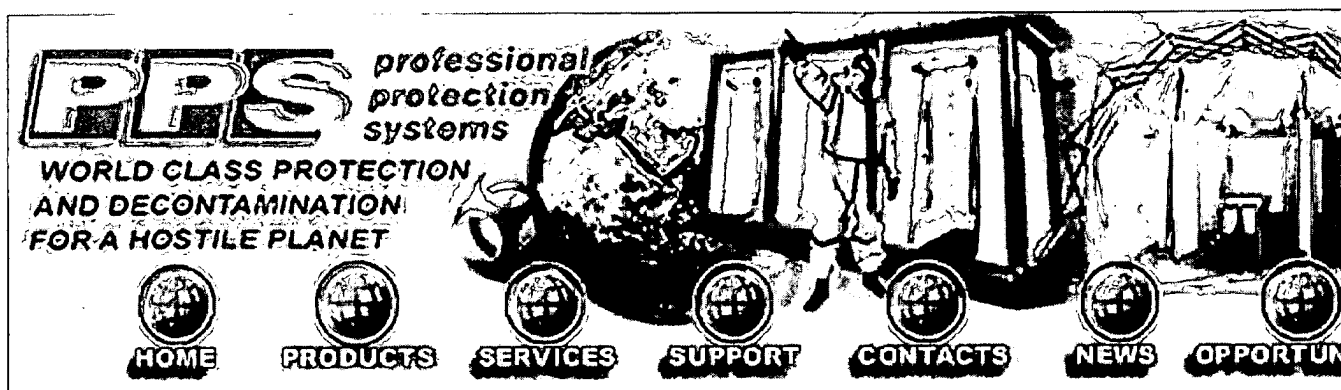
**ACCESSORIES FOR PPS DECON SHOWER SYSTEM**



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## TECTIVE CLOTHING

### PPS PRODUCTS... DECONTAMINATION SHOWERS

A great deal of development has gone into our range of Decontamination Showers.

Two fundamentally separate requirements are catered for in our designs, those of the stretcher-bound or wounded casualty requiring assistance within the Decontamination Shower and those of the industrial / emergency worker able to walk in and carry out decontamination of themselves.

#### The Plychem DPI

This is just one example from our extensive range of shower systems. It is a highly effective, competitively priced decontamination shower system that can be easily transported and rapidly deployed to cope with decontamination of personnel wherever it is required.

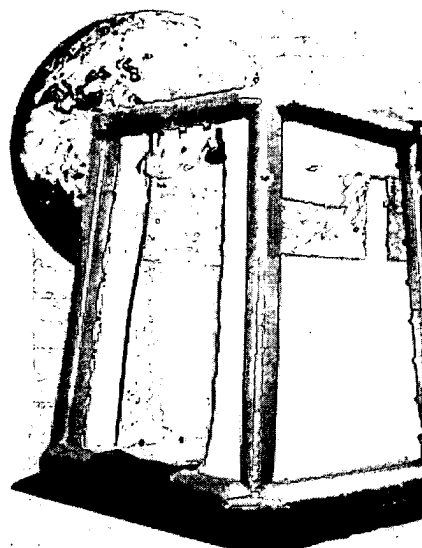
The DPI is in line with current thinking in employing low flow high-pressure jets to create a water 'mist' that achieves effective decontamination with the minimum of water usage. This is also environmentally sound in producing only a small amount of potentially contaminated water requiring disposal. Weighing only 30Kg and supplied in a heavy duty carry bag, the DPI can be deployed within 2 minutes to create a full size, stable 1.9M square x 2.3M high shower cubicle. Low flow (40 Lt / min) high-pressure water jets combined with hand held brush achieves rapid and thorough decontamination.

An integral containment system retains waste water for safe disposal, whilst optional disposable inner liner reduces need to decontaminate shower cubicle after use. Optional detergent injection system assists with decontamination procedure.

Any compressed air supply can be used to inflate shower, and any water supply of at least 2 or 3 Bar pressure can be used for decontamination.

Larger decontamination shower systems also available from our extensive range.

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 [Click for Complete Printable Details DECONTAMINATION SHOWERS \( Requires Adobe Acrobat \)](#)

### DECAS-W Decontamination Casualty Shower System

The Plychem DECAS-W shower system is, example from our range. It is a cost effective inflatable shower system designed for decontamination of either stretcher-bound or walking casualties. Unlike the DPI shower system, DECAS-W relies on using the two hand held low flow, low pressure roses to achieve gentle, local decontamination of casualty prior to injury treatment.

DECAS-W can be rapidly deployed close to Hospital A&E department, thus avoiding the contamination into other areas.

Weighing only 39 Kg and supplied in a robust carry bag, DECAS-W can be deployed within 2-3 minutes. It is stable 1.9M wide, 2.9M long, 2.1M high cut taking a stretcher trolley and casualty staff.

Twin low flow shower roses are available for casualty decontamination.

An optional water heater is available to help core temperature during decontamination, & DECAS-W to use any local cold water supply. Integral containment system retains potentially contaminated waste water for safe, environmentally friendly disposal when finished.

Any compressed air supply can be used to including compressors and BA cylinders.

---

**PROFESSIONAL PROTECTION SYSTEMS, 120 Station Road, Woburn Sands, MILTON KEYNES, Bucks**  
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Serial 10/762413

July 23, 2004

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200446  
File 347:JAPIO Nov 1976-2004/Mar(Updated 040708)  
File 348:EUROPEAN PATENTS 1978-2004/Jul W02  
File 349:PCT FULLTEXT 1979-2002/UB=20040715,UT=20040708  
E2 1 AU=PEEK HUBERTUS LAURENTIUS MARIA  
E3 0 \*AU=PEEK I  
E4 1 AU=PEEK J

File 16:Gale Group PROMT(R) 1990-2004/Jul 22  
File 160:Gale Group PROMT(R) 1972-1989  
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jul 22  
File 47:Gale Group Magazine DB(TM) 1959-2004/Jul 22  
File 481:DELPHESES Eur Bus 95-2004/Jun W4  
Set Items Description  
S1 0 IAN()PEEK

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200446  
File 347:JAPIO Nov 1976-2004/Mar(Updated 040708)  
File 348:EUROPEAN PATENTS 1978-2004/Jul W02  
File 349:PCT FULLTEXT 1979-2002/UB=20040715,UT=20040708  
Set Items Description  
S1 1 PA='PEEK I' OR PA='PEEK I (PEEK-I)'

1/19/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015471819 \*\*Image available\*\*

WPI Acc No: 2003-533965/200351

XRPX Acc No: N03-423653

Training equipment for golf player has frame holding horizontal T-bar  
made of flexible tubes inflated with air supplied by hand pump

Patent Assignee: PEEK I (PEEK-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 20304418	U1	20030618	DE 2003U2004418	U	20030319	200351 B

Priority Applications (No Type Date): DE 2003U2004418 U 20030319

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 20304418	U1		9	A63B-069/36	

Abstract (Basic): DE 20304418 U1

NOVELTY - The **training** equipment (10) has a frame (11) with a lower vertical column (13) standing on an H-shaped foot (12). A clamp holds an upper vertical column (14) with a horizontal frame member (15.1) containing an air pump worked by a flexible squeeze bulb (18).

DETAILED DESCRIPTION - The horizontal T-bar (15,16) is made of thin flexible foil and is made comparatively rigid by inflation with air. The T-bar provides a guide for improving the stance of the golfer.

USE - Frame with guide T-bar to assist in **training** golfer.

ADVANTAGE - The frame is adjustable to suit the height of the golfer and the soft **inflatable** T-bar avoids the risk of injury.

DESCRIPTION OF DRAWING(S) - The drawing shows a frame with an **inflatable** T-bar portion.

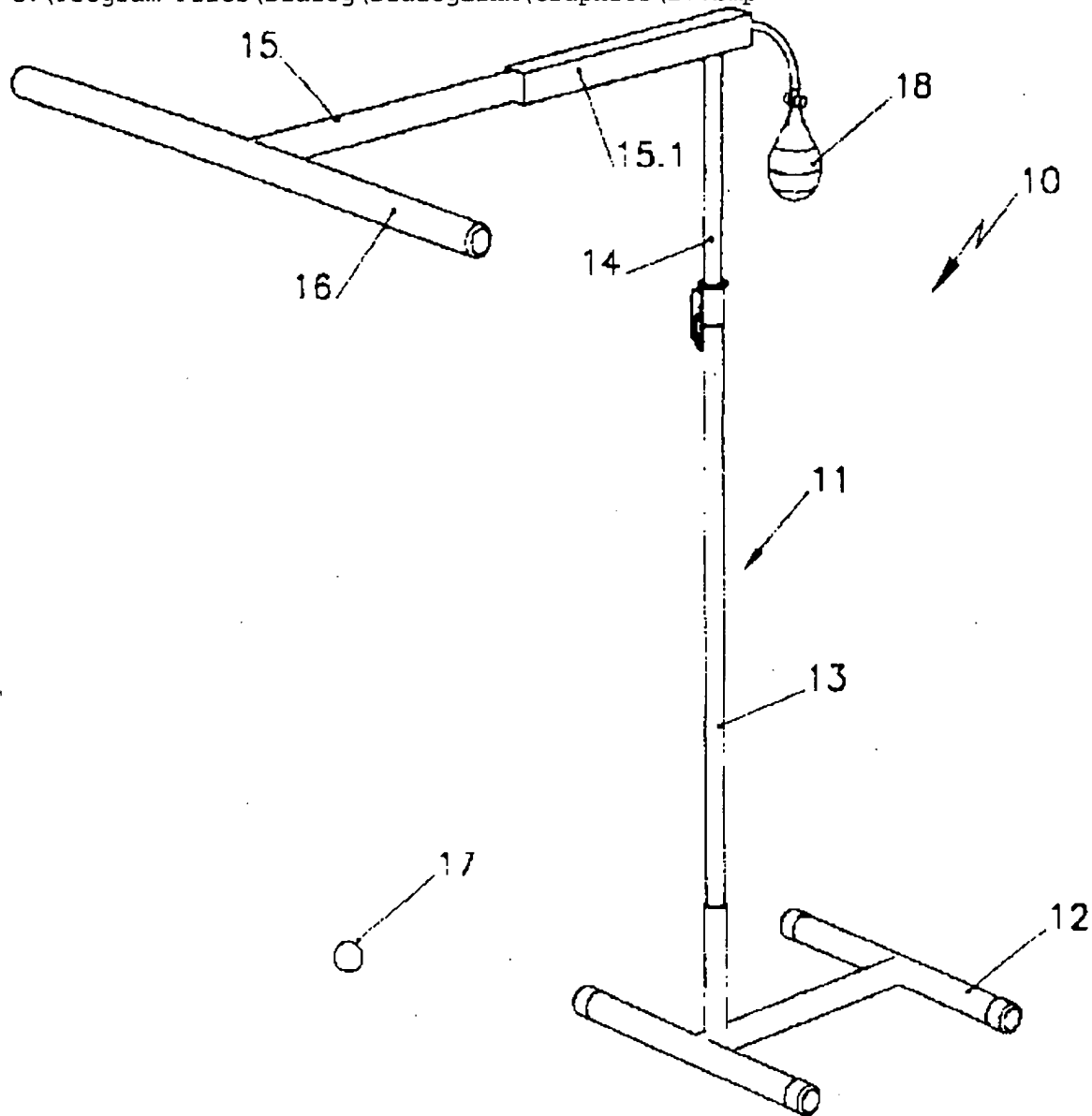
Training equipment (10)

Frame (11)

H-shaped foot (12)

Lower vertical column (13)  
Upper vertical column (14)  
Horizontal T-bar (15,16)  
Horizontal frame member (15.1)  
Flexible squeeze bulb (18)  
pp; 9 DwgNo 1/2

C:\Program Files\Dialog\DialogLink\Graphics\B7.bmp



International Patent Class (Main): A63B-069/36

Serial 10/762413

July 23, 2004

File 16:Gale Group PROMT(R) 1990-2004/Jul 22  
 File 160:Gale Group PROMT(R) 1972-1989  
 File 148:Gale Group Trade & Industry DB 1976-2004/Jul 22  
 File 47:Gale Group Magazine DB(TM) 1959-2004/Jul 22  
 File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jul 22  
 File 649:Gale Group Newswire ASAP(TM) 2004/Jul 20  
 File 20:Dialog Global Reporter 1997-2004/Jul 22  
 File 481:DELPHES Eur Bus 95-2004/Jun W4  
 File 636:Gale Group Newsletter DB(TM) 1987-2004/Jul 22  
 File 635:Business Dateline(R) 1985-2004/Jul 22  
 File 141:Readers Guide 1983-2004/Jun

S1	201	INFLATABLE() STRUCTURE? ?
S2	3803218	RACK? ? OR POLE OR POLES OR STAND OR STANDS OR COLUMN? ?
S3	1090098	EXTENSION? ? OR ELL OR ELLS
S4	2966905	ROD OR RODS OR BAR OR BARS OR ARM OR ARMS OR PROTRUBER?NCE? ? OR CROSSBAR? ?
S5	0	S1(S) S2(S) S3(S) S4
S6	12	S1(S) S2:S4
S7	11	RD (unique items)
S8	1	S7/2004
S9	10	S7 NOT S8
S10	10	Sort S9/ALL/PD,A
S11	13218	SWING? ?(S) GOLF
S12	0	S1(S) S11
S13	7	GOLF AND S1
S14	6	S13 NOT S6
S15	6	RD (unique items) [not relevant]

10/7/2 (Item 2 from file: 148)

DIALOG(R) File 148:Gale Group Trade &amp; Industry DB

(c) 2004 The Gale Group. All rts. reserv.

03972157 SUPPLIER NUMBER: 08132573

**An inflatable structure and a space helicopter. (John Mecca, patent nos.  
 4,793,574 and 4,880,186) ( column )**

Andrews, Edmund L.

New York Times, v139 , Sat ed, col 6, p18(N) p32(L)

Nov 25, 1989

10/7/3 (Item 3 from file: 16)

DIALOG(R) File 16:Gale Group PROMT(R)

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01126566 Supplier Number: 41271614

**Inflatable Arm Segments May Lighten Shuttle's Manipulator System**

Design News, p150

April 9, 1990

ABSTRACT: L'Garde (Tustin, California) is developing a new design for the Remote Manipulator System (RMS), which the Space Shuttle carries in its cargo bay. The company has built and tested two models that use **inflatable** manipulator **arm** segments that are surprisingly stiff. The proposed system would occupy only 1/8 the space of the present RMS. The new design offers the ability of increasing and decreasing its stiffness with the amount of inflation pressure. The arm segments use Neoprene-coated Kevlar partly due to Kevlar's high stiffness in both warp and and fill directions. According to P Malone, L'Garde design engineering mgr, there is a significant role for **inflatable structures** in space and in terrestrial situations. COPYRIGHT 1999 Gale Group

Serial 10/762413

July 23, 2004

File 6:NTIS 1964-2004/Jul W3  
 File 8:Ei Compendex(R) 1970-2004/Jul W2

Set	Items	Description
S1	1432	INFLATABLE() STRUCTURE? ?
S2	142213	RACK? ? OR POLE OR POLES OR STAND OR STANDS OR COLUMN? ?
S3	90693	EXTENSION? ? OR ELL OR ELLS
S4	147444	ROD OR RODS OR BAR OR BARS OR ARM OR ARMS OR PROTRUBER?NCE? ? OR CROSSBAR? ?
S5	0	S1 AND S2 AND S3 AND S4
S6	84	S1 AND S2:S4
S7	39	S1 AND S2
S8	2	S7 AND S3:S4
S9	2	RD (unique items)
S10	11	S1(S)S2:S4
S11	11	S10 NOT S8
S12	11	RD (unique items)
S13	56	INFLAT?(2N)S2:S4
S14	9	S1 AND S13
S15	6	S14 NOT S8:S10
S16	6	RD (unique items)

9/7,K/1 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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1349809 NTIS Accession Number: TIB/B87-81662

**Extendable nozzle for the HM60 rocket engine**

Oechslein, W.

Messerschmitt-Boelkow-Blohm G.m.b.H., Munich (Germany, F.R.). Information und Dokumentation.

Corp. Source Codes: 064776008

Report No.: MBB-UR--899/86-PUB; ESA-SP--265

1986 8p

Languages: English

Journal Announcement: GRAI8807

Symposium on fluid dynamics and space, Brussels (Belgium), 25-26 Jun 1986.

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NTIS Prices: MF E07

Country of Publication: Germany, Federal Republic of

The application of an extendable nozzle, in order to increase the performance of a thrust chamber at high altitudes, has been under investigation for a relatively long time. It is simply not possible to design one nozzle which can operate efficiently from sea level to orbit conditions. The obvious advantage of a two-position nozzle, is the capability of adapting better to the ambient pressure conditions, which results in a considerable performance increase; an increase of Delta I sub sp approx.= 15-20 s appears feasible. From a performance **stand**-point, the optimum area ratio of the extendable nozzle was estimated to be approximately epsilon = 130 for the metallic nozzle/ **extension** structure, and about 150-170 for a carbon/carbon fiber design. The application of carbon/carbon fiber material will result in a considerable performance increase potential. The most feasible cooling method of the extendable nozzle, was shown to be a combination of film-, and radiation cooling. The

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July 23, 2004

major area of future investigations will have to be: a) at what altitude should nozzle be deployed, b) heat transfer-, and aerodynamic problems during deployment, c) deployment mechanism, and d) suitable light-weight materials. It is obvious that a considerable effort must be devoted to these, and related problems area, before a feasible design can be realized. (orig.). (Copyright (c) 1987 by FIZ. Citation no. 87:081662.)

Descriptors: Liquid propellant rocket engines; Ariane launch vehicle; Nozzle design; **Inflatable structures**; Film cooling; Rocket exhaust

9/7,K/2 (Item 2 from file: 6)

DIALOG(R) File 6:NTIS

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0610438 NTIS Accession Number: AD-824 113/5/XAB

**Inflatable Vertical Float System. Phase I Report**

Pauken, J. E. ; Rieckmann, R. E.

Martin Marietta Corp Baltimore MD

Corp. Source Codes: 403251

Report No.: ER-14680

Nov 67 82p

Journal Announcement: GRAI7709

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NTIS Prices: PC A05/MF A01

Contract No.: N00019-67-C-0289

This proposed program will put to practical demonstration the concept of seaplane open ocean ASW operation. The HRV is an approximate 1/3 model scale representation of the P5 seaplane. It is equipped with a hydrofoil and has satisfactorily demonstrated take off and landing in seas three times the wave height permissible with the basic hull. Then with the incorporation of the **Inflatable Vertical Float System**, the HRV will have open ocean seakeeping capability and thus be a complete open ocean seaplane. The overall float system is shown. Initially, design goals were established and all were achieved within the scope of the study. These were, a system weight of 400 lbs or less, a 30 second retraction or **extension** cycle, capability to move through the water at 6 knots, identical float construction and size, and inflation system capability for two deployment-retraction cycles. The **inflatable Vertical Float System** is made up of a central telescoping **column** which supports an accordion type flotation bag. Local intermediate ribs are provided to maintain the cross sectional shape and take any torsional loads. **Extension** of the **Inflatable Vertical Float System** is accomplished by a single 2000 psig nitrogen storage bottle and associated pneumatic system. Control is provided at the pilot station through two flow control valves which regulate wing and hull float inflation. The operating pressure for the Inflatable Float System is 5 psig.

Descriptors: Flying boats; Floats; Antisubmarine aircraft; Design; Cylindrical bodies; **Inflatable structures**; Hydrodynamic configurations; Extendable structures

12/7/3 (Item 3 from file: 8)

DIALOG(R) File 8:Ei Compendex(R)

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06171381 E.I. No: EIP02437153910

Title: Structural modifications to the framing system of a proposed

**lunar/Martian inflatable structure**

Author: Bateman, Ted A.; Abarbanel, Jenine E.; Criswell, Marvin E.  
Corporate Source: BioServe Space Technologies University of Colorado  
Campus Box 429, Boulder, CO 80309-0429, United States  
Conference Title: Proceedings of Space 2002: the Seventh International  
Conference and Exposition on Engineering, Construction, Operations and  
Business in Space  
Conference Location: Albuquerque, NM, United States Conference Date:  
20000227-20000302  
E.I. Conference No.: 59961  
Source: Space 2000 2000.  
Publication Year: 2000  
ISBN: 0784404798  
Language: English  
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)  
Journal Announcement: 0210W4

Abstract: The previously described "tuft pillow" lunar/Martian  
**inflatable structure** provides the structural efficiency of a  
membrane-based pressure vessel design with the "cube-like" space-use  
efficiency of a terrestrial room. A framing system of cylindrical arches  
and **columns** ties together the spherical and prismoidal shapes of the  
wall, floor and roof units. Two framing options are examined: 1) rigid  
thin walled tubes and 2) pressurized membrane tubes. Because of the  
geometry of this "tuft pillow" structure, it is not an ideal tensile  
structure and modifications are required to minimize wrinkling in the  
membrane elements. This paper describes the addition of arch and **column**  
webs and **column** tie-downs to make this pressure membrane structure more  
efficient. 6 Refs.

12/7/4 (Item 4 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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05317934 E.I. No: EIP99074724474

**Title: Foaming behavior of polyurethane to be applied to inflatable space  
structures under low pressure environment**

Author: Hatta, Hiroshi; Udagawa, Atsushi; Higuchi, Ken; Yokota, Rikio;  
Sugibayashi, Toshio  
Corporate Source: Inst of Space and Astronautical Science, Sagami-hara, Jpn  
Source: Zairyo/Journal of the Society of Materials Science, Japan v 48 n  
1 1999. p 49-55  
Publication Year: 1999  
CODEN: ZARYAQ ISSN: 0514-5163  
Language: Japanese  
Document Type: JA; (Journal Article) Treatment: X; (Experimental)  
Journal Announcement: 9909W1

Abstract: **Inflatable space structures** are expected to be a promising  
candidate for future large-scaled space structures because of the  
compactness at the launch stage and the simple extension mechanism. In  
this paper, the feasibility of an **inflatable structure** was examined  
utilizing the expansion force of foam materials as the **inflation** thrust. As  
a trial **inflatable space structure**, an extensible mast, which was made of  
foam material covered with an aluminum sheet or a carbon fiber cloth was  
chosen. This paper describes foaming behavior of the material in space. As  
a first report of the study, intensive discussion was placed upon the  
effect of low pressure environment on the expansion behavior. The expansion  
behavior of foam material appeared to be controlled mainly by the pressure

difference between the inside and outside of foams. It was found that the fracture of foams could be prevented and the density of the foam material could be controlled even in the low pressure environment by controlling the amount of blowing agent. The effect of tube geometry on the expansion behavior was also discussed. (Author abstract) 16 Refs.

12/7/5 (Item 5 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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04230523 E.I. No: EIP95082820935  
Title: Light robot arm based on inflatable structure

Author: Salomonski, N.; Shoham, M.; Grossman, G.  
Corporate Source: Israel Inst of Technology, Haifa, Isr  
Source: CIRP Annals - Manufacturing Technology v 44 n 1 1995. p 87-90  
Publication Year: 1995  
CODEN: CIRAAT ISSN: 0007-8506  
Language: English  
Document Type: JA; (Journal Article) Treatment: A; (Applications)  
Journal Announcement: 9510W3

Abstract: This paper deals with a new kind of mechanical structure for robotic arm based on elements made of thin, **inflatable** shells. This approach offers the advantage of increasing the strength-to-weight ratio of the robot. Moreover, it allows compact packaging and ease of robot deployment, critical in hard-to-reach spaces, where volume and weight are of utmost importance. In addition, the robot is safer due to less damage in case of collision. At this work we test the feasibility of using that new kind of mechanical structure to an practical implementation, by simulation and by operative experiment. (Author abstract) 7 Refs.

12/7/6 (Item 6 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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04003293 E.I. No: EIP94121503792  
Title: Feasibility study of inflatable structures for a lunar base

Author: Nowak, Paul S.; Sadeh, Willy Z.; Janakus, Jeffrey  
Corporate Source: Colorado State Univ, Fort Collins, CO, USA  
Source: Journal of Spacecraft and Rockets v 31 n 3 May-Jun 1994. p 453-457  
Publication Year: 1994  
CODEN: JSCRAG ISSN: 0022-4650  
Language: English  
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)  
Journal Announcement: 9502W1

Abstract: The design of a structure on the moon requires addressing a host of issues not encountered on Earth. A modular **inflatable structure** consisting of thin membranes of composite material integrated with supporting **columns** and arches is proposed. An initial linear analysis of the structure is briefly reviewed. The actual response of an inflatable membrane is nonlinear and, hence, a nonlinear numerical analysis of the stresses and displacements was undertaken. Results indicate that an **inflatable structure** is a feasible concept for a lunar structure. (Author abstract) 26.

12/7/8 (Item 8 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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03488067 E.I. Monthly No: EIM9209-047470

**Title: Inflatable structures of non-circular cross section.**

Author: Matsumoto, Eric E.; Pazargadi, Shayan; Richter, Philip J.

Corporate Source: Fluor Daniel, Inc, Irvine, CA, USA

Conference Title: Proceedings of the 3rd International Conference on Engineering, Construction, and Operations in Space III

Conference Location: Denver, CO, USA Conference Date: 19920531

Sponsor: ASCE; Aerospace & Electronic Systems Soc; AIAA; ASME; American Solar Energy Soc; et al

E.I. Conference No.: 16701

Source: Proc 3 Int Conf Eng Constr Oper Space III. Publ by ASCE, New York, NY, USA. p 147-158

Publication Year: 1992

ISBN: 0-87262-868-x

Language: English

Document Type: PA; (Conference Paper) Treatment: G; (General Review); A; (Applications)

Journal Announcement: 9209

Abstract: This paper discusses six approaches to achieve an **inflatable structure** of non-circular cross section for use in lunar base development. Other papers have examined potential multiple uses of a large, inflatable lunar assembly building which employs a non-circular cross section in order to provide a large ratio of usable-space to total-space and to limit the work associated with excavation and regolith covering. Six approaches which could produce an **inflatable structure** to meet this need are investigated qualitatively. These approaches are: cable-reinforced membranes, external cable anchorage, membranes designed through formfinding, regolith ballast restraint, membranes combined with rigid structural members, and tension **columns** and partitions. Two of these six approaches, cable reinforced membranes and membranes combined with rigid members, appear to have the most potential for use, although further study and analysis are required. (Author abstract) 13 Refs.

12/7/9 (Item 9 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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03488061 E.I. Monthly No: EIM9209-047464

**Title: Analysis of an inflatable module for planetary surfaces.**

Author: Nowak, Paul S.; Sadeh, Willy Z.; Criswell, Marvin E.

Corporate Source: Colorado State Univ, Fort Collins, CO, USA

Conference Title: Proceedings of the 3rd International Conference on Engineering, Construction, and Operations in Space III

Conference Location: Denver, CO, USA Conference Date: 19920531

Sponsor: ASCE; Aerospace & Electronic Systems Soc; AIAA; ASME; American Solar Energy Soc; et al

E.I. Conference No.: 16701

Source: Proc 3 Int Conf Eng Constr Oper Space III. Publ by ASCE, New York, NY, USA. p 78-88

Publication Year: 1992

ISBN: 0-87262-868-x

Language: English

Document Type: PA; (Conference Paper) Treatment: G; (General Review); T; (Theoretical); A; (Applications)

Journal Announcement: 9209

Abstract: Design and construction of a structure on planetary surfaces requires addressing a host of issues not encountered on Earth. A modular



quilted **inflatable structure** consisting of thin membranes of composite material integrated with supporting **columns** and arches is proposed. An initial linear analysis of the structure is briefly reviewed. The actual response of an inflatable membrane is nonlinear and, hence, a nonlinear numerical analysis of the stresses and displacements was undertaken. Results based on the loadings on a lunar structure clearly indicate that an **inflatable structure** is a feasible concept and is ideally suited for a planetary surface structure. (Author abstract) 8 Refs.

12/7/11 (Item 11 from file: 8)

DIALOG(R)File 8:EI Compendex(R).

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00211431 E.I. Monthly No: EI72X018014

Title: Need an auditorium. Try inflatables.

Author: ANON

Source: Plastics Design & Processing v 11 n 2 Feb 1971 p 29

Publication Year: 1971

CODEN: PDPRA ISSN: 0032-1176

Language: ENGLISH

Journal Announcement: 72X0

Abstract: Brief description of an **inflatable structure** made of polyethylene film and designed as an auditorium for displaying purpose. The auditorium could be installed in 5 min with a small box compressor to maintain constant pressure in the beams and **columns**. When inflated, the rectangular is 8 ft high, 28 ft long and 13 ft wide.

16/7/1 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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1230029 NTIS Accession Number: NTN86-0182

**Inflatable Column Structure: Lightweight structural member is easy to store**  
(NTIS Tech Note)

National Aeronautics and Space Administration, Washington, DC.

Corp. Source Codes: 011249000

Feb 86 1p

Languages: English

Journal Announcement: GRAI8610

FOR ADDITIONAL INFORMATION: Contact: NASA Technology Transfer Div., PO Box 8757 BWI Airport, MD 21240; (301) 621-0100 ext 241. Refer to NPO-16216/TN.

NTIS Prices: Not available NTIS

Country of Publication: United States

This citation summarizes a one-page announcement of technology available for utilization. An **inflatable structural column** consists of a fiber-reinforced tube segmented at regular intervals by circumferential belts of fiber. The belts cinch the wall slightly, but the interior of the column is essentially unobstructed. Uninflated, the column is simply a short stack of fabriclike folds. It is compact and easily stored. The column can be readily inflated to its full length by a tank of gas such as nitrogen or even manually by a foot or hand pump. In its **inflated state**, the **column** takes on a segmented, caterpillarlike form. The length of the column and its thrust, torque, and moment-carrying capacity are determined by the internal pressure, the column dimensions, and the number and tensile strength of the fibers. The **inflatable column** would have applications where a lightweight, easily-stored temporary support is needed. For example, it could serve as a jack for automobiles or for structures during

repairs. It can also be used as a support for temporary bleachers or swimming pools.

16/7/2 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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1120587 NTIS Accession Number: N84-25105/7

**Investigation of a Cylindrical Inflated Beam- Column Structure**  
(B.S. Thesis)

Winship, C. ; Powell-jones, O. C.

Bristol Univ. (England). Dept. of Aeronautical Engineering.

Corp. Source Codes: 004430008; BX274147

Sponsor: National Aeronautics and Space Administration, Washington, DC.

Report No.: BU-301

Jun 83 52p

Languages: English

Journal Announcement: GRAI8419; STAR2215

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

Country of Publication: United Kingdom

The investigation of inflated circular cylinders by testing a single slender Melinex cylinder as a beam **column** structure, supported at the center of the beam with wires is reported. The **inflated beam column** structure carried a substantial load, many times its own weight, even after wrinkling; the value was limited by the extent of wrinkling of the membrane. Theoretical expressions for the unwrinkled deflection and wrinkle loads are derived, and are in agreement with the experimental results.

16/7/3 (Item 3 from file: 6)

DIALOG(R)File 6:NTIS

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0382755 NTIS Accession Number: N73-20300/XAB

**Investigation of Extendable Nozzle Concepts**  
(Final Report)

Scott, C. N. ; Nordlie, R. W. ; Sowa, W. W.

Goodyear Aerospace Corp., Akron, Ohio.

Report No.: NASA-CR-124165; GER-15240

Nov 72 123p

Journal Announcement: GRAI7313; STAR1111

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC E05/MF A01

Contract No.: NAS8-21476

Preliminary research and technology were performed toward the development of a transpiration cooled **inflatable nozzle extension**. The J-2 engine of the Saturn-Apollo launch vehicle was selected as a design application test bed to provide realistic operational parameters and a possible hot firing demonstration. The nozzle extension attached at the 27.5 to 1 area ratio of the basic J-2 nozzle exit and extended to an area ratio of 48 to 1. The final nozzle extension design as evolved during this effort utilized conically woven stainless steel airmat as the major construction material.

Model and full scale nozzle extensions were fabricated and tested although an actual J-2 hot firing demonstration was not possible due to the lack of a proper altitude test opportunity. (Author)

16/7/4 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.  
06081791 E.I. No: EIP02277001577  
Title: Shape memory composite development for use in gossamer space inflatable structures  
Author: Cadogan, David P.; Scarborough, Stephen E.; Lin, John K.; Sapna III, George H.  
Corporate Source: ILC Dover, Inc., Frederica, DE, United States  
Conference Title: 43rd Structures, Structural Dynamics and Materials Conference  
Conference Location: Denver, CO, United States Conference Date: 20020422-20020425  
Sponsor: AIAA  
E.I. Conference No.: 59242  
Source: Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference v 2 2002. p 1294-1304 2002-1372  
Publication Year: 2002  
CODEN: CPSCDO ISSN: 0273-4508  
Language: English  
Document Type: CA; (Conference Article) Treatment: T; (Theoretical); X; (Experimental)  
Journal Announcement: 0207W1  
Abstract: Several new shape memory, composite materials have been developed that allow the requirements of gossamer space structures (high packing efficiency, low mass, high stiffness, etc.) to be met. A detailed analysis and test program has been conducted on several different materials at the coupon level, as well as at the component level in the form of inflatable deployable columns. Materials have been tested to determine their degradation from folding and packaging, storage life and aging characteristics, vacuum stability, outgassing characteristics, and ability to return to shape when heated after packing. Shape memory composites have also been tested at the sub-component and system level in several applications. Isogrid beam columns have been designed, manufactured, and structurally tested to verify materials performance parameters. The columns were repeatedly packed and deployed to assess the degradation of the materials in actual use and the resultant strength and stiffness loss. Compression, and torsion strength and stiffness were assessed in the test program. 10 Refs.

16/7/5 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.  
04343358 E.I. No: EIP96023023674  
Title: Robotic manipulators based on inflatable structures  
Author: Rybski, Michael; Shoham, Moshe; Grossman, Gershon  
Corporate Source: Technion, Haifa, Isr  
Source: Robotics and Computer-Integrated Manufacturing v 12 n 1 Mar 1996. p 111-120  
Publication Year: 1996  
CODEN: RCIMEB ISSN: 0736-5845

Language: English

Document Type: JA; (Journal Article) Treatment: X; (Experimental)

Journal Announcement: 9604W1

Abstract: This paper deals with a new kind of mechanical structure for the robotic arm based on elements made of thin, inflatable shells. This approach offers an increase of the payload-to-weight ratio of the robot. Moreover, it allows compact packaging and easier robot deployment, which is critical in hard-to-reach spaces and where volume and weight are of utmost importance. An inflatable link was constructed and tested statically and dynamically as part of the robot structure. To overcome the flexibility effects, an end-point sensor was installed that enables closing the control loop on the tip location. Path tracking performances of the experimental system, which consists of a SCARA type robot **arm** with an **inflatable** forearm, an end-effector position sensor and a digital controller, are presented. (Author abstract) 12 Refs.

16/7/6 (Item 3 from file: 8)

DIALOG(R)File 8:EI Compendex(R)

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01391182 E.I. Monthly No: EI8309075032 E.I. Yearly No: EI83046455

**Title: DYNAMICS OF AN INFLATABLE STRUCTURE SUITABLE FOR USE IN  
SUBMARINE DETECTION: A BRIEF REVIEW.**

Author: Modi, V. J.

Corporate Source: Univ of British Columbia, Dep of Mechanical Engineering, Vancouver, BC, Can

Source: Proceedings - Indian Academy of Sciences, (Series): Engineering Sciences v 5 pt 1 Mar 1982 p 41-63

Publication Year: 1982

CODEN: PRISD9 ISSN: 0253-4096

Language: ENGLISH

Journal Announcement: 8309

Abstract: This paper reviews the static and dynamical characteristics of a neutrally buoyant oceanographic platform, consisting of a three-arm array made of sandwiched viscoelastic materials, over a range of system parameters. At the beginning the attention is focused on the **inflated** cantilevered **arm**, an important constituent of the platform. The static flexural behavior of the beam as predicted by the three-parameter solid model and its free vibration behavior are substantiated by a detailed experimental program. This is followed by a general Lagrangian formulation for the system represented by a buoy-cable-array assembly. For small oscillations, inplane and out-of-plane motions decouple and are analyzed separately. Finally, attention is focused on the dynamic response of the system to surface wave excitation at the fundamental frequency. The information should prove useful in evolving design procedures for developing submarine detection systems. 15 refs.

Serial 10/762413

July 23, 2004

File 16:Gale Group PROMT(R) 1990-2004/Jul 22  
 File 160:Gale Group PROMT(R) 1972-1989  
 File 47:Gale Group Magazine DB(TM) 1959-2004/Jul 22  
 File 148:Gale Group Trade & Industry DB 1976-2004/Jul 22  
 File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jul 22  
 File 649:Gale Group Newswire ASAP(TM) 2004/Jul 20  
 File 570:Gale Group MARS(R) 1984-2004/Jul 22  
 File 88:Gale Group Business A.R.T.S. 1976-2004/Jul 21  
 File 635:Business Dateline(R) 1985-2004/Jul 21  
 File 481:DELPHEES Eur Bus 95-2004/Jun W4  
 File 112:UBM Industry News 1998-2004/Jan 27  
 File 20:Dialog Global Reporter 1997-2004/Jul 22

Set	Items	Description
S1	204405	INFLATE? ? OR INFLATING OR INFLATABLE
S2	3898612	RACK? ? OR STAND? ? OR FRAME OR FRAMES OR FRAMEWORK
S3	7553560	EXTENSION? ? OR ELL OR ELLS OR "ADD-ON" OR ADDITION? ?
S4	0	S1()S3(S)S2
S5	0	S1(1W)S3(S)S2
S6	115	S1(S)S2(S)S3
S7	2	S1(5N)S2(5N)S3
S8	1	RD (unique items)
S9	511	S1(2N)S2:S3
S10	210	S9(S)S2
S11	208	S9(20N)S2
S12	205	S9(10N)S2
S13	205	S9(5N)S2
S14	8	S9(S)S2(S)S3
S15	8	S14 NOT S7
S16	6	RD (unique items) [not relevant]
S17	2903808	TRAINING
S18	3	S9(S)S17
S19	3	S18 NOT (S7 OR S14) [not relevant]
S20	2	GOLF(S)S9
S21	2	S20 NOT (S7 OR S14 OR S18) [not relevant]
S22	10	S6(S)S17
S23	10	S22 NOT (S7 OR S14 OR S18 OR S20)
S24	8	RD (unique items)

8/7/1 (Item 1 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

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01657767 Supplier Number: 42055819 (THIS IS THE FULLTEXT)

**VACUUM FRAMES FOR COMPOSITE STRUCTURE FABRICATION ENHANCE PRODUCT QUALITY;  
 ADD APPLICATIONS FLEXIBILITY**

News Release, pl

May 3, 1991

TEXT:

Robert H. Fuller Advertising Inc.

252 Nassau St.

Princeton,NJ 08540

609/921-0099

Fax: 201-996-2022

Contact: Chuck Roye

1-800-635-9333

New ManiVac (TM) vacuum frames from Arlon, Silicone Technologies  
 Division, Bear, DE use integral vacuum distribution systems to

provide better, more uniform vacuum distribution for structural and electronic grade composite lamination. The ManiVac (patent pending) system is a permanent, adjustable gasket and frame assembly that combines the "quick seal" performance of a vacuum frame with extremely long and reliable operation. Vacuum distribution is incorporated into the seal itself, permitting ManiVac frames to be used for a wide variety of laminating applications as found in printed circuitry, aerospace composites such as large wing skins, recreational products, bonding, and small parts debulking and curing. The system accommodates all commonly used composite processes such as high pressure autoclaves, hydraulic and vacuum presses, and circulation ovens.

The heart of the ManiVac system is a combination gasket and vacuum port fabricated into a single aluminum manifold. The external vacuum port is welded into the connector section; holes located in the tubes/perimeter distribute uniform vacuum draw through the manifold/gasket/vacuum port combination. The ManiVac assembly is bonded directly to the tool surface or lamination plate with RTV which provides seal integrity and also allows the manifold to be removed without damage for tool repairs or alterations.

Use of the ManiVac system is simple and straightforward, without need for clamps or fixtures. The top frame is placed over the tube assembly and a vacuum source connected. Initial vacuum seal is created by contact between the ManiVac tube and the silicone top sheet. This technique provides even vacuum on all sides of the laminate, discouraging bridging since the silicone rubber is kept under equal tension around the perimeter of the frame. Because through-the-wall vacuum ports are not required, vacuum rates may be higher for greater vacuum integrity and increased frame life.

ManiVac systems are designed for use with the company's Thermovac (TM) silicone rubber reusable vacuum bagging materials and systems. Thermovac vacuum bagging systems are versatile, cost-effective methods for consolidating and curing epoxy, phenolic, and imide type prepreg composite materials. Thermovac materials are available in a wide variety of configurations including roll stock or as completed vacuum bags ready for use. Typical reusable vacuum tooling configurations of Thermovac materials--in addition to the ManiVac system--include vacuum frames, vacuum blankets, inflatable mandrels, vacuum frames, and single frames. The company offers users of its materials a full range of technical services including custom mold/tooling design and development.

For more information on ManiVac vacuum frames or any of the company's reusable vacuum bagging system materials and/or tooling, contact Arlon, Silicone Technologies Division, 1100 Governor Lea Road, Bear, DE 19701; telephone 1-800-635-9333.

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24/3,X/2 (Item 2 from file: 16)

DIALOG(R) File 16:Gale Group PROMT(R)

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07304028 Supplier Number: 61906430 (USE FORMAT 7 FOR FULLTEXT)

Executive Edge fits corporate teamwork training to a tee.(Brief

Article)(Statistical Data Included)

WEINER, RICHARD

Crain's Cleveland Business, v21, n19, pG-16

May 1, 2000

Language: English    Record Type: Fulltext  
Article Type: Brief Article; Statistical Data Included  
Document Type: Magazine/Journal; Trade  
Word Count: 556

Mr. Willis' "experienced-based" corporate **training** firm, Executive Edge Inc. of Chagrin Falls, last fall introduced a **training** program called Vision 20/20 to teach executive teams how to improve their work performance. Using golf outings as a **framework**, the program reviews issues including management and organizational development, networking, integrity and strategic planning, Mr...

...about someone on a golf course," Mr. Willis said. The golf program is a logical **extension** of the team-building **training** programs Executive Edge typically runs in outdoor settings. For instance, the six-person firm's "Virtual Adventures" program uses **inflatable** and molded plastic props for team mountain climbing, a team obstacle course, team human foosball...

...year, when his company was approached by Warner Bros. Music to design a golf-based **training** program. He said golf is ideal for **training** in the corporate world. "A recent Hyatt Hotel survey of golfing executives indicated that 93...

...North Olmsted-based faucet manufacturer Moen Inc., recently enlisted the firm to design a golf **training** program. Jeff Garn, director of human resources for Moen, said the results were encouraging. "We...

...area in 1994 and has been pleasantly surprised by local companies' embrace of experience-based **training**. "I didn't expect to stay here long after I arrived in 1994," Mr. Willis...

...great place to do business." Mr. Willis said the firm in the last year conducted **training** programs for clients in 14 cities. Executive Edge now books about 20 to 25 sessions...

Serial 10/762413

July 23, 2004

File 350:Derwent WPIX 1963-2004/UD,UM &amp;UP=200446

File 347:JAPIO Nov 1976-2004/Mar(Updated 040708)

Set	Items	Description
S1	341	INFLATABLE() STRUCTURE? ?
S2	658681	RACK? ? OR POLE OR POLES OR STAND OR STANDS OR COLUMN? ?
S3	163843	EXTENSION? ? OR ELL OR ELLS
S4	1238378	ROD OR RODS OR BAR OR BARS OR ARM OR ARMS OR PROTRUBER?NCE? ? OR CROSSBAR? ?
S5	0	S1 AND S2 AND S3 AND S4
S6	37	S1 AND S2:S4
S7	24	S1(S)S2:S4
S8	620	INFLAT?(3N)S2:S4
S9	10	S1 AND S8
S10	166	S1/TI
S11	18	S6 AND S10
S12	14	S11 NOT S9
S13	13	S6 NOT (S9 OR S11)
S14	1	GOLF AND S1

9/26,TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008850217

WPI Acc No: 1991-354236/199149

Inflatable amphibious personal carriage - has inflatable cylinder around metal frame with sliding surfaces, stabilising bars, seat, pulling cables, etc.

9/26,TI/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007721572

WPI Acc No: 1988-355504/198850

Photographic light modifier with opening into inflatable structure - has passageway for inflation of cylindrical body comprising translucent and reflecting panels which enclose light sources

9/26,TI/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007658028

WPI Acc No: 1988-291960/198841

Deer decor lure - has inflatable envelope to simulate deer anchored to ground via stakes

9/26,TI/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

003117682

WPI Acc No: 1981-M7733D/198150

Drag-reducing fairing for vehicle - consists of inflatable structure on roof to give streamlined shape secured by twist locks

9/19/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.



015716468      \*\*Image available\*\*

WPI Acc No: 2003-778668/200373

XRPX Acc No: N03-624093

**Inflatable device for use in events and activities e.g. carnival, fair, sporting event, trade show, has component connector, consists of base and cap, which connects removable inflatable component to base inflatable component**

Patent Assignee: SCHERBA IND INC (SCHE-N); SCHERBA R J (SCHE-I)

Inventor: SCHERBA R J

Number of Countries: 103    Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030187082	A1	20031002	US 2002367909	P	20020326	200373 B
			US 2002217677	A	20020812	
WO 200382607	A2	20031009	WO 2003US9175	A	20030325	200376
AU 2003220517	A1	20031013	AU 2003220517	A	20030325	200435

Priority Applications (No Type Date): US 2002367909 P 20020326; US 2002217677 A 20020812

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030187082	A1	16	E04B-001/34	Provisional application US 2002367909
WO 200382607	A2 E		B60C-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003220517 A1                      E04B-001/34    Based on patent WO 200382607

Abstract (Basic): US 20030187082 A1

NOVELTY - The device includes a removable inflatable component is partially connected to a base inflatable component (10) by a component connector. The component connector has a base and a cap (60). The cap is releasably connected to the base by a connection arrangement.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a component connector; and
- (b) a removable inflatable component

USE - For use in events and activities e.g. carnival, fair, sporting event, trade show.

ADVANTAGE - Allows easy access to the interior of the removable **inflatable structure** and inhibits or prevents fluid e.g. air from entering into and/or escaping from the side opening the when the side opening is closed. Enables repair or replacement of the removable inflatable components without having to return the complete inflatable device to the manufacturer. Can be formed easily into inflatable skating rinks, inflatable courts, inflatable wall partitions to section off various areas, **inflatable** booths and/or **bars**, **inflatable** maze, **inflatable** rides, inflatable playground, paint ball structures and/or maze, obstacle courses. Can be used to quickly and cost effectively replace worn inflatable components and/or change out inflatable components on an inflatable system. Can be conveniently and quickly assembled and disassembled at various outdoor sponsored events without the need to build or assemble metal and/or wood structures.

DESCRIPTION OF DRAWING(S) - The figure shows the partial elevation view of the base inflatable component disconnected from the base inflatable component by removing the cap of the connector from the base of the connector.

Base inflatable component (10)

Top surface (12)

Sealing landing (48)

Threaded wall (50)

Cap (60)

pp; 16 DwgNo 4/6

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Derwent Class: Q43

International Patent Class (Main): B60C-000/00; E04B-001/34

File Segment: EngPI

9/19/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014300527 \*\*Image available\*\*

WPI Acc No: 2002-121231/200216

Related WPI Acc No: 1998-086838; 2000-685933

XRPX Acc No: N02-090913

**Inflatable tubular torso restraint system for vehicle seat, has anchor arm rotationally biased to remove slack in torso belt so that full range of occupant sizes can be safely and comfortably accommodated**

Patent Assignee: SIMULA INC (SIMU-N)

Inventor: ROMEO D J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6336656	B1	20020108	US 97829750	A	19970331	200216 B

US 98169302 A 19981009  
US 2000577659 A 20000525

Priority Applications (No Type Date): US 2000577659 A 20000525; US 97829750  
A 19970331; US 98169302 A 19981009

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6336656	B1	34	B60R-021/18		CIP of application US 97829750 CIP of application US 98169302 CIP of patent US 5839753 CIP of patent US 6126194

Abstract (Basic): US 6336656 B1

NOVELTY - The torso restraint system has an anchor arm (1140) pivotally mounted to either vehicle seat or vehicle side structure, and rotationally biased to remove slack in an inflatable torso belt (1102) so that a full range of adult occupant sizes can be safely and comfortably accommodated. One end of the torso belt is secured to the anchor arm.

DETAILED DESCRIPTION - The torso belt has an **inflatable structure** that contracted in length and increases in cross-sectional area when fully inflated. A gas generator (1160) is fluidly connected to the **inflatable structure** which has a flat configuration prior to inflation. A crash sensor is electrically connected to the gas generator to initiate gas generation when impact is detected e.g. when **inflatable structure** is fully inflated.

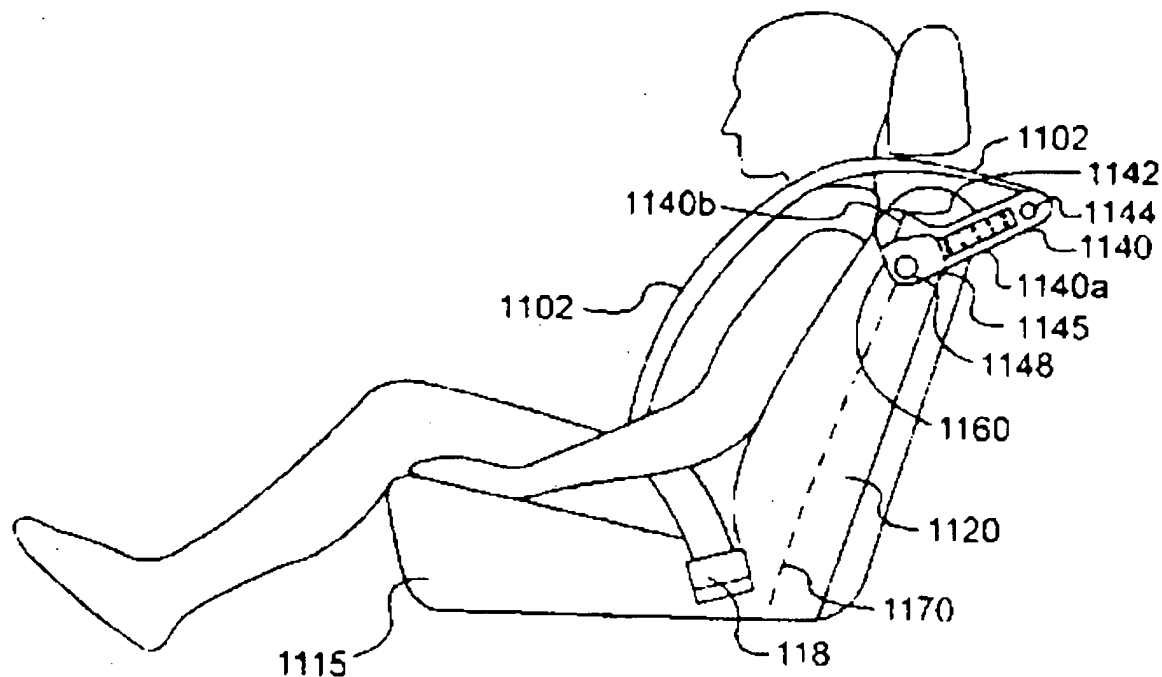
USE - For vehicle seat in e.g. trucks, vans, airplane, railroad trains, elevators, helicopters.

ADVANTAGE - Reduces extent and severity of injuries during a crash. Inflates on impact to protect occupant of vehicle. Restricts occupant motion during a crash. Has inflatable braided tube material that shortens as it inflates to remove slack and pretension the restraint system, that distributes crash loads over larger occupant surface area to minimize pain and potential injury, that is not subject to roping, roll-out and seam splitting problems, and that protects head in side impacts. Does not require flexible fill hose which might need to continuously flex, bend or stroke during normal belt use. Has rotatable upper anchor arm that operates as a height adjustable upper anchor point for inflatable torso belt.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of the top-filled inflatable tube secured to the anchor **arm** of the **inflatable** tubular torso restraint system.

Torso belt (1102)  
Anchor arm (1140)  
Gas generator (1160)  
pp; 34 DwgNo 10/15

C:\Program Files\Dialog\DialogLink\Graphics\E0.bmp



Derwent Class: Q17  
International Patent Class (Main): B60R-021/18  
File Segment: EngPI

9/19/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
009450278 \*\*Image available\*\*  
WPI Acc No: 1993-143803/199317  
XRPX Acc No: N93-109795

**Air isolated fifth wheel device - has trailer with isolate vibrational input and inflatable air bar operably disposed in centred location below support plate**

Patent Assignee: NAVISTAR INT TRANSPORTATION CORP (NAVI-N)

Inventor: HARROLD D O

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5203850	A	19930420	US 91713175	A	19910610	199317 B

Priority Applications (No Type Date): US 91713175 A 19910610

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5203850	A	8	B62D-053/06	

Abstract (Basic): US 5203850 A

The device includes a base plate which is slidably received within side channel members mounted to a vehicle frame and includes structure for releasably fixing same to the side channel members at various positions along it. A secondary plate is secured to said base plate and forms a pocket, which is secured an air inflatable structure sized and configured to extend across and seat within the pocket.

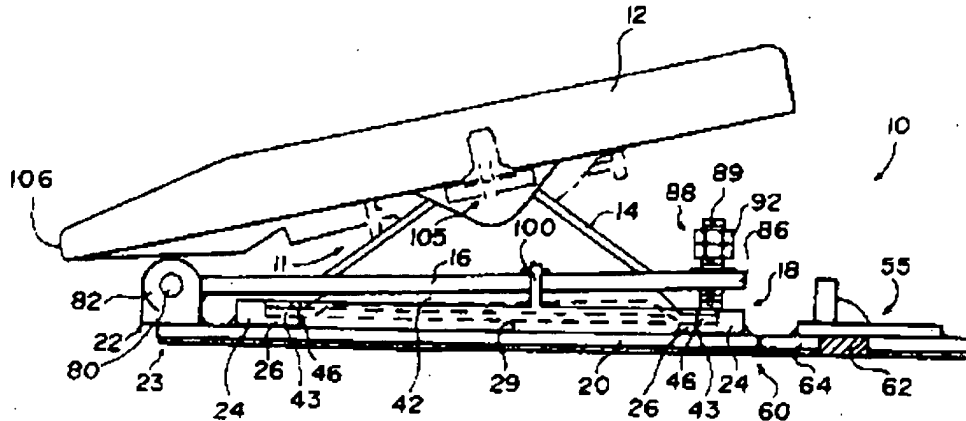
A top plate is hingedly fixed to the base plate at one end with a lower surface of the top plate seating across the inflatable structure. A fifth wheel assembly is pivotably mounted on the top

plate and rides upon the **inflatable structure**.

**ADVANTAGE** - The air isolation device can be added on to existing fifth wheel assemblies without any significant modification to the tractor chassis and is relatively light weight.

Dwg. 1/7

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Derwent Class: Q22; Q63

International Patent Class (Main): B62D-053/06

International Patent Class (Additional): F16F-009/04

File Segment: EngPI

9/19/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008856915 \*\*Image available\*\*

WPI Acc No: 1991-360936/199149

XRPX Acc No: N91-276522

**Inflatable structure for outer space application - with gripper assembly on outer link remotely controlled, encoders providing angular position indication**

Patent Assignee: UNIV MICHIGAN (UNMI )

Inventor: KOREN Y; WEINSTEIN Y

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5065640	A	19911119	US 90549963	A	19900709	199149 B

Priority Applications (No Type Date): US 90549963 A 19900709

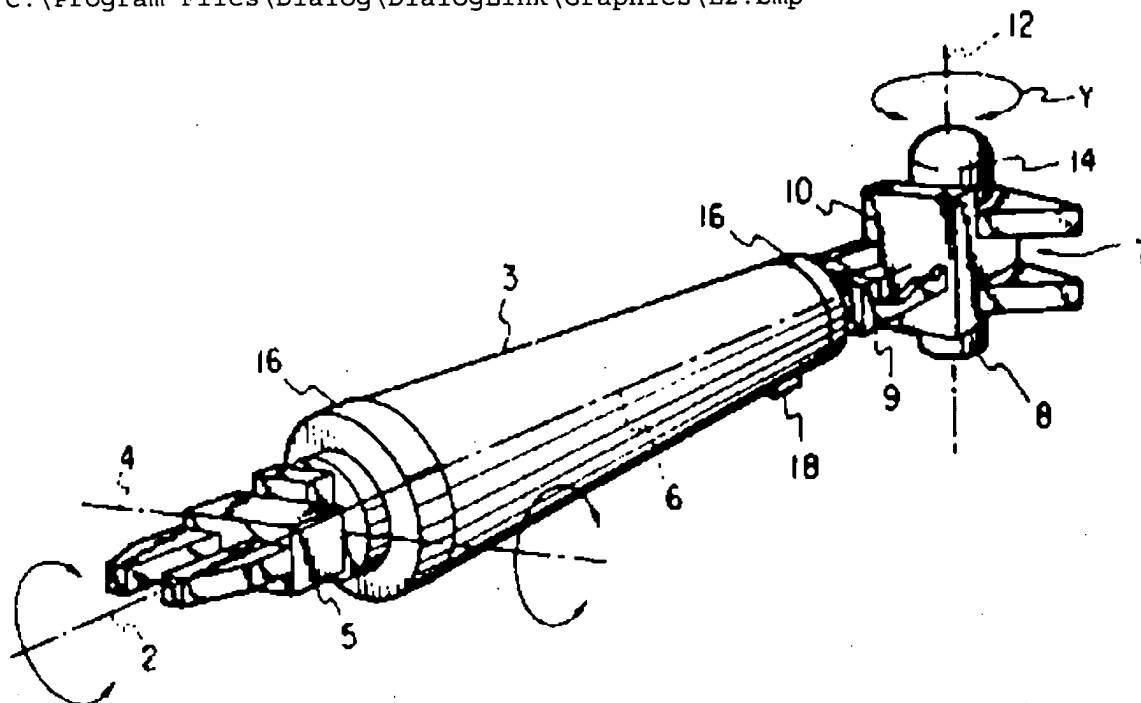
Abstract (Basic): US 5065640 A

The **inflatable structure** comprises inner and outer elongated links, each formed of a flexible fluid tight material and each defining at least one fluid tight chamber. The material of each link has sufficient strength to remain fluid tight when the at least one chamber is inflated with a fluid to a pressure sufficient that the link is rigidised by the fluid pressure of the at least one chamber. A joint pivotally connects the inner and outer links to one another.

The inner link is pivotally mounted at the base. A first drive pivotally drives the inner link at the base. A second drive pivotally drives the outer link about the inner link such that a position of the outer link is controlled w.r.t. the inner link when the links are inflated. The first and second drive are positioned at the base and the outer link is connected to the second drive by a drive train.

USE - **Inflatable** robotic arm for use in low gravity or weightless environments, e.g. space shuttle application. (10pp  
Dwg.No.1/5)

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Derwent Class: Q25

International Patent Class (Additional): B64G-000/01; G05G-001/00;  
G05G-011/00

File Segment: EngPI

9/7/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004295303

WPI Acc No: 1985-122181/198520

XRAM Acc No: C85-053142

XRPX Acc No: N85-091841

**Inflatable structure column with filament reinforced resin matrix -  
remains deflated until required with resin prevented from curing**

Patent Assignee: BOXMEYER J G (BOXM-I)

Inventor: BOXMEYER J G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4514447	A	19850430	US 84592615	A	19840323	198520 B

Priority Applications (No Type Date): US 84592615 A 19840323

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 4514447	A	10		

Abstract (Basic): US 4514447 A

**Inflatable** support member has **tubular** body which remains in collapsed state until inflated. The body has attachment means at least at one end and comprises an impermeably sealable inner liner which is

covered with a filamentary structure consisting of a layer of longitudinally oriented filaments sandwiched between at least two layers of filaments spirally wound at predetermined angles in opposite directions. The filaments are bonded together to form a rigid structure after inflation of the body, pref. by means of a resin matrix, curing before inflation being prevented.

USE/ADVANTAGE - Support member provides light wt., **inflatable** , pneumatic structural **column** for various applications, e.g., an orbiting structure for use in extraterrestrial space. Member is storable in compact form prior to inflation. It has improved strength characteristics also. In partic., it will not lose shape or collapse after inflation and curing of the resin matrix due to leakage or even exhaustion of the tubular body.

Derwent Class: A88; Q67

International Patent Class (Additional): F16L-055/12

9/7/10 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001551853

WPI Acc No: 1976-00090X/197601

**Inflatable temporary teracing for elevated spectators - comprising single or multi-compartment fabric structures**

Patent Assignee: CAMUSOT G (CAMU-I)

Number of Countries: 011 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
BE 832075	A	19751201				197601 B
DE 2542339	A	19760408				197616
NL 7511319	A	19760330				197616
SE 7510816	A	19760426				197620
DD 120682	A	19760620				197632
FR 2286259	A	19760528				197639
AT 7507365	A	19771115				197748
US 4058939	A	19771122				197748
GB 1526774	A	19780927				197839
CH 610619	A	19790430				197920
IT 1047318	B	19800910				198048

Priority Applications (No Type Date): BE 832075 A 19750801; BE 6198 A

19740927; BE 16198 A 19740927; BE 820417 A 19740927; BE 45123 A 19750801

Abstract (Basic): BE 832075 A

artificial terraces comprising **inflatable structures** designed to **stand** on level soil and provide a series of levels of increasing height. Used as portable or temporary grandstands or pavilions for spectators for sporting events etc. They are of lightweight, are quick to erect without requiring skilled carpenters scaffold riggers, etc. and are readily collapsible.

Derwent Class: A93; Q43; Q46

International Patent Class (Additional): E04B-001/34; E04H-003/12

12/26, TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014590941

WPI Acc No: 2002-411645/200244

**Large movable antenna for satellite communication system, includes lens**

shaped inflatable structure which is fixed to cable structure at several points and provides tension to cable structure by extension

12/26, TI/4 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014112946

WPI Acc No: 2001-597158/200167

Pneumatic component to form inflatable structure ; has hollow body of flexible material with push rod along surface line and spiral traction elements fixed inside knobs at ends of push rod

12/26, TI/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

008813378

WPI Acc No: 1991-317391/199143

Inflatable structure secured by tension - has connection for flexible strap-like position member having portion constrained in pocket affixed to bladder

12/26, TI/10 (Item 10 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

007570580

WPI Acc No: 1988-204512/198829

Self-standing inflatable bath - has inflatable structure , inflated by pressurised steam which also heats water and creates bubbles

12/26, TI/11 (Item 11 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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003855886

WPI Acc No: 1984-001412/198401

Extendible screen comprising fluid- inflatable structure - which can expand in direction of screen extension into extended screening layer and retract into compacted flattened band

12/19/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014914439 \*\*Image available\*\*

WPI Acc No: 2002-735146/200280

XRAM Acc No: C02-208162

XRPX Acc No: N02-579591

Sealing device for holes in boats, has torus-shaped inflatable structure axially mounted on pole for supporting sealing material

Patent Assignee: LIVESY M J (LIVE-I)

Inventor: LIVESY M J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
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GB 2374047	A	20021009	GB 20023087	A	20020211	200280 B
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Priority Applications (No Type Date): GB 200128454 A 20011128; GB 20018680

A 20010406; GB 200122538 A 20010919; GB 200127045 A 20011112

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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GB 2374047 A 9 B63B-043/16

Abstract (Basic): GB 2374047 A

NOVELTY - An **inflatable** assembly and a gas delivery system are provided at both ends of a **pole**, respectively. The assembly has multiple **inflatable structures** (16), each held by a protective cover. Each structure is inflated to form semi-ridged torus-shaped ring for supporting the sealing material (34), such that the structure does not come in direct contact with hole space post deployment.

USE - For sealing holes in boats or other vessels.

ADVANTAGE - Sealing a hole of varying size is performed quickly. Risk of failure of **inflatable structure** due to puncturing, is prevented. The **inflatable structure** is maintained in the small pre-deployment diameter by protective cover.

DESCRIPTION OF DRAWING(S) - The figure shows a side cross-sectional view of the sealing device.

**Inflatable structure** (16)

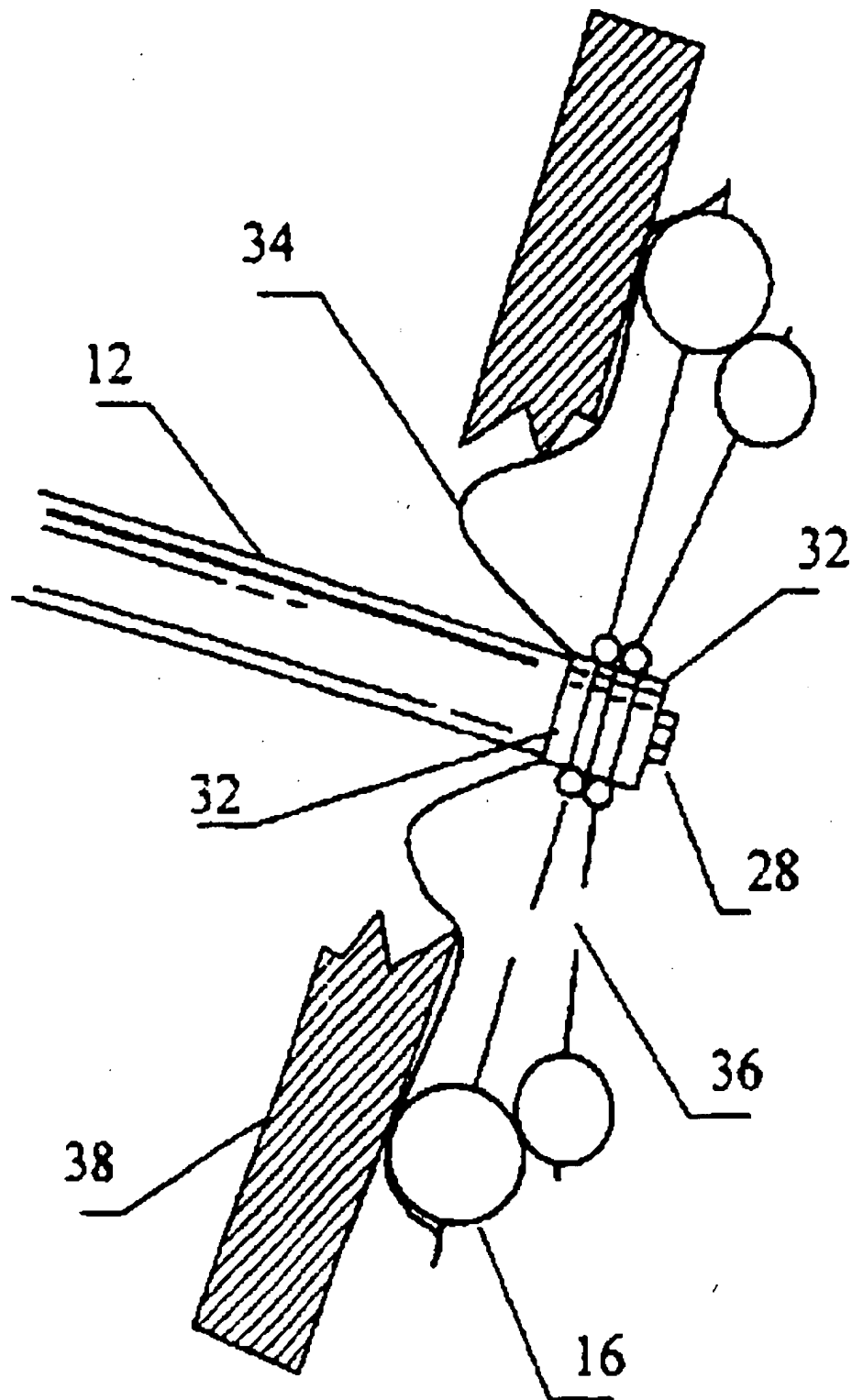
Sealing material (34)

pp; 9 DwgNo 3/4

Technology Focus:

TECHNOLOGY FOCUS - POLYMERS - The material used for **inflatable structure** is polyurethane coated nylon.

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Derwent Class: A95; Q24  
International Patent Class (Main): B63B-043/16  
File Segment: CPI; EngPI  
Manual Codes (CPI/A-N): A99-A

12/19/2 (Item 2 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
014652726 \*\*Image available\*\*  
WPI Acc No: 2002-473430/200251  
XRPX Acc No: N02-373777

**Tethered inflatable structure with internal tethering ropes, uses vertical post set in the ground and internal frame in inflatable to attach tethering ropes to vertical pole**

Patent Assignee: AIR DECO (AIRD-N); TAIX C (TAIX-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2816281	A1	20020510	FR 200014203	A	20001106	200251 B

Priority Applications (No Type Date): FR 200014203 A 20001106

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
FR 2816281	A1	12	B64B-001/66	

Abstract (Basic): FR 2816281 A1

NOVELTY - The **inflatable structure** has the inflatable envelope (3) tethered internally, with a frame inside structure attached to an internal post (4) set in the ground and extending vertically inside the inflated envelope. The base of the post (5) is anchored in the ground.

USE - Inflatable sign or advertising for commercial use.

ADVANTAGE - Reduces ground area needed for tethering ropes, is easily taken down, easily transportable and easily erected at another site.

DESCRIPTION OF DRAWING(S) - The drawing shows an elevation schematic.

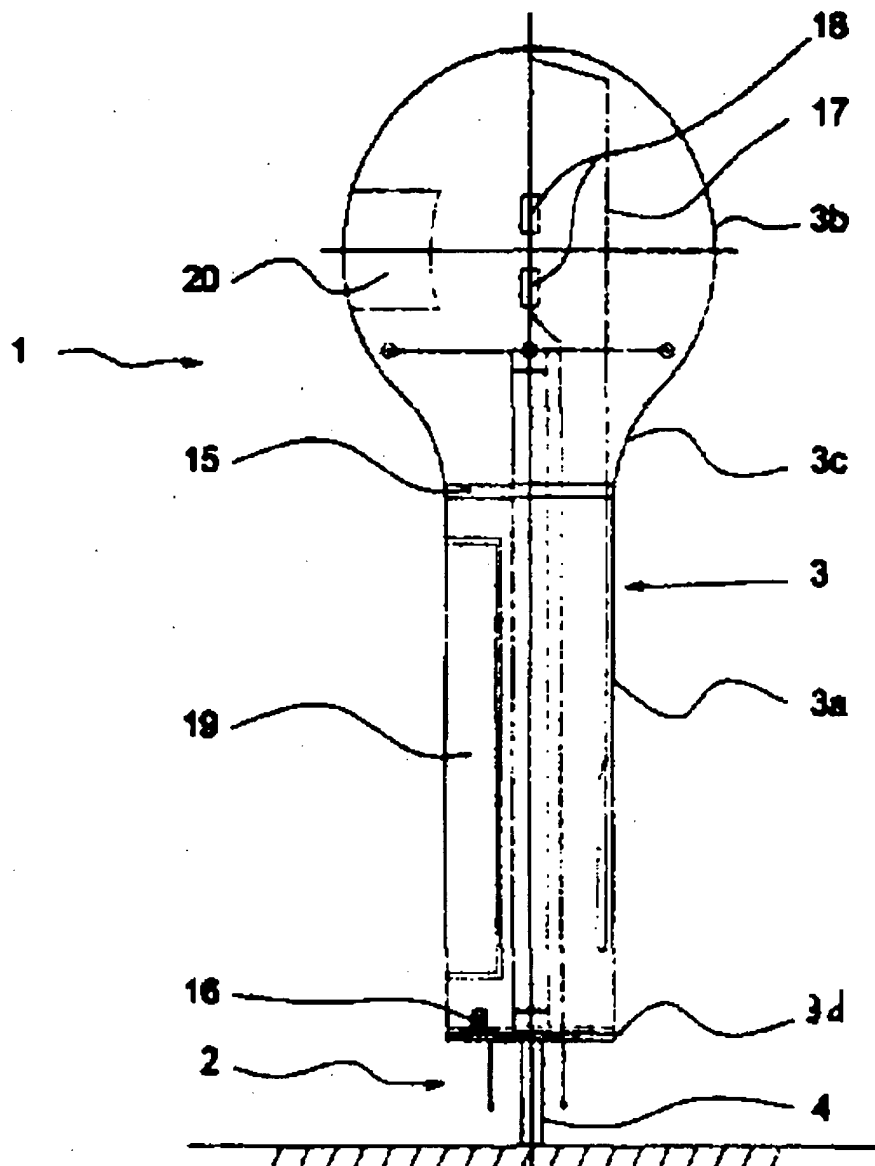
Inflatable envelope (3)

Internal post (4)

Base of post (5)

pp; 12 DwgNo 1/4

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Derwent Class: P85; Q25

International Patent Class (Main): B64B-001/66

International Patent Class (Additional): B64B-001/50; B64F-001/14;  
G09F-021/06

File Segment: EngPI

12/19/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014057570 \*\*Image available\*\*

WPI Acc No: 2001-541783/200160

XRAM Acc No: C01-161800

XRPX Acc No: N01-402657

Inflatable structure of electronic articles e.g. keyboard has inflatable tube  
made of polymer to maintain structure in desired inflated shape

Patent Assignee: PEARL TECHNOLOGY HOLDINGS LLC (PEAR-N)

Inventor: DA SILVA L B; LUU K V; WEBER M R; WEBER P J

Number of Countries: 095 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200165167	A1	20010907	WO 2001US6787	A	20010301	200160 B
AU 200141944	A	20010912	AU 200141944	A	20010301	200204

Priority Applications (No Type Date): US 2000680994 A 20001006; US  
2000519494 A 20000302; US 2000648893 A 20000825

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200165167	A1	E 37	F16M-013/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS  
JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL  
PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200141944 A F16M-013/00 Based on patent WO 200165167

Abstract (Basic): WO 200165167 A1

NOVELTY - An **inflatable** compartment (250) either in the shape of tube or cylinder or rectangle of bladder are made of polymer maintains **inflatable structure** supporting electronic article, in desired inflated shape.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Inflatable support structure;
- (b) Electronic article supporting method

USE - For supporting electronic articles such as roll-up keyboard, foldable keyboard, solid keyboard, roll-up OLED, foldable OLED, foldable LED, loudspeaker, foldable active matrix, data input device, e-book, electronic bulletin board, electronic advertisement sign, computer screen, television screen, cellphone, PDA and also for supporting **arms** and wrists when operating computer, keyboard and typewriter.

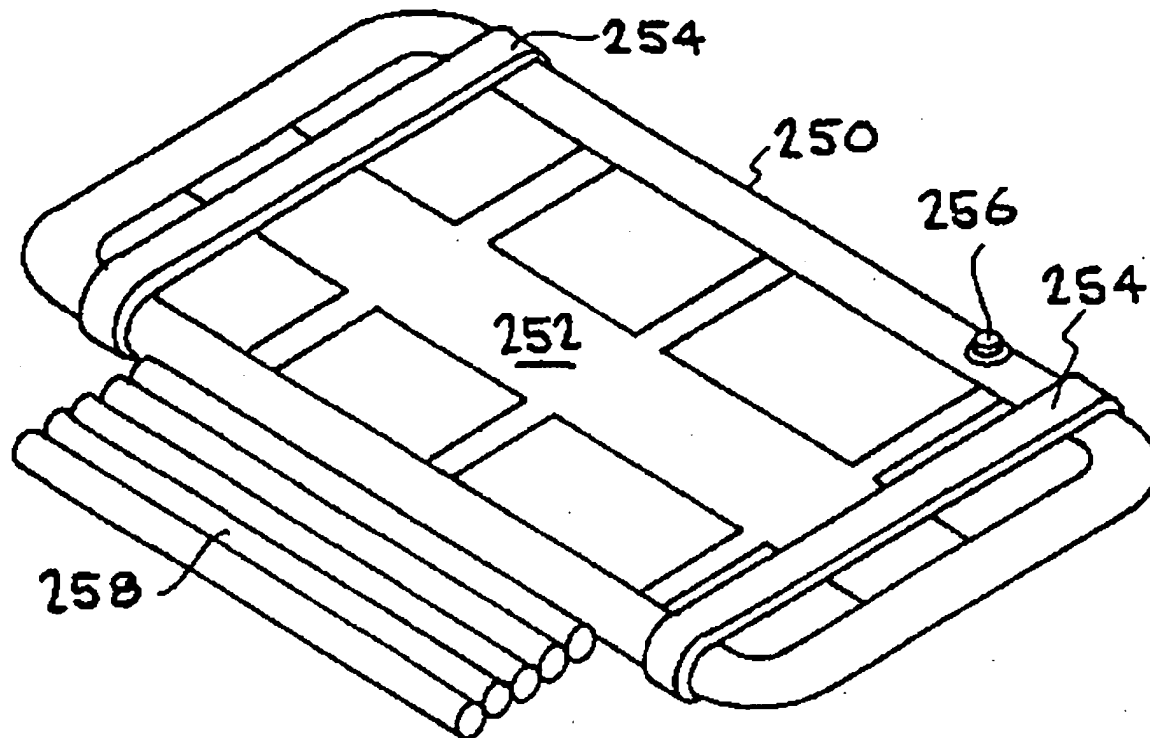
ADVANTAGE - Provides **inflatable structure** for supporting variety of non-rigid, semi-rigid, flexible and partially rigid articles and also for supporting wrists and **arms** when operating with computer, keyboard and typewriter.

DESCRIPTION OF DRAWING(S) - The figure shows an **inflatable structure** for a keyboard.

Inflatable compartment (250)

pp; 37 DwgNo 10/23

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Derwent Class: A84; Q68; T01  
International Patent Class (Main): F16M-013/00  
International Patent Class (Additional): G06F-001/16  
File Segment: CPI; EPI; EngPI  
Manual Codes (CPI/A-N): A99-A  
Manual Codes (EPI/S-X): T01-L

12/19/6 (Item 6 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
012042622 \*\*Image available\*\*  
WPI Acc No: 1998-459532/199840  
XRAM Acc No: C98-138914  
XRPX Acc No: N98-358912

Inflatable structure, which may be used in various applications - has at least one hollow sleeve with at least two fastening members, each having an eye for receipt of a flexible rod

Patent Assignee: PLYSU PROTECTION SYSTEMS LTD (PLYS-N)

Inventor: GRIFFITHS P M; MAY R J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2323395	A	19980923	GB 985109	A	19980310	199840 B

Priority Applications (No Type Date): GB 975468 A 19970317

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
GB 2323395	A		8 E04H-015/20	

Abstract (Basic): GB 2323395 A

An inflatable structure (1) comprises at least one hollow sleeve (2,3,4), which may be inflated to form the structure (1). The sleeve (2,3,4) has attached to it at least two fastening members (13), each having an eye through it for receipt of a flexible rod. A

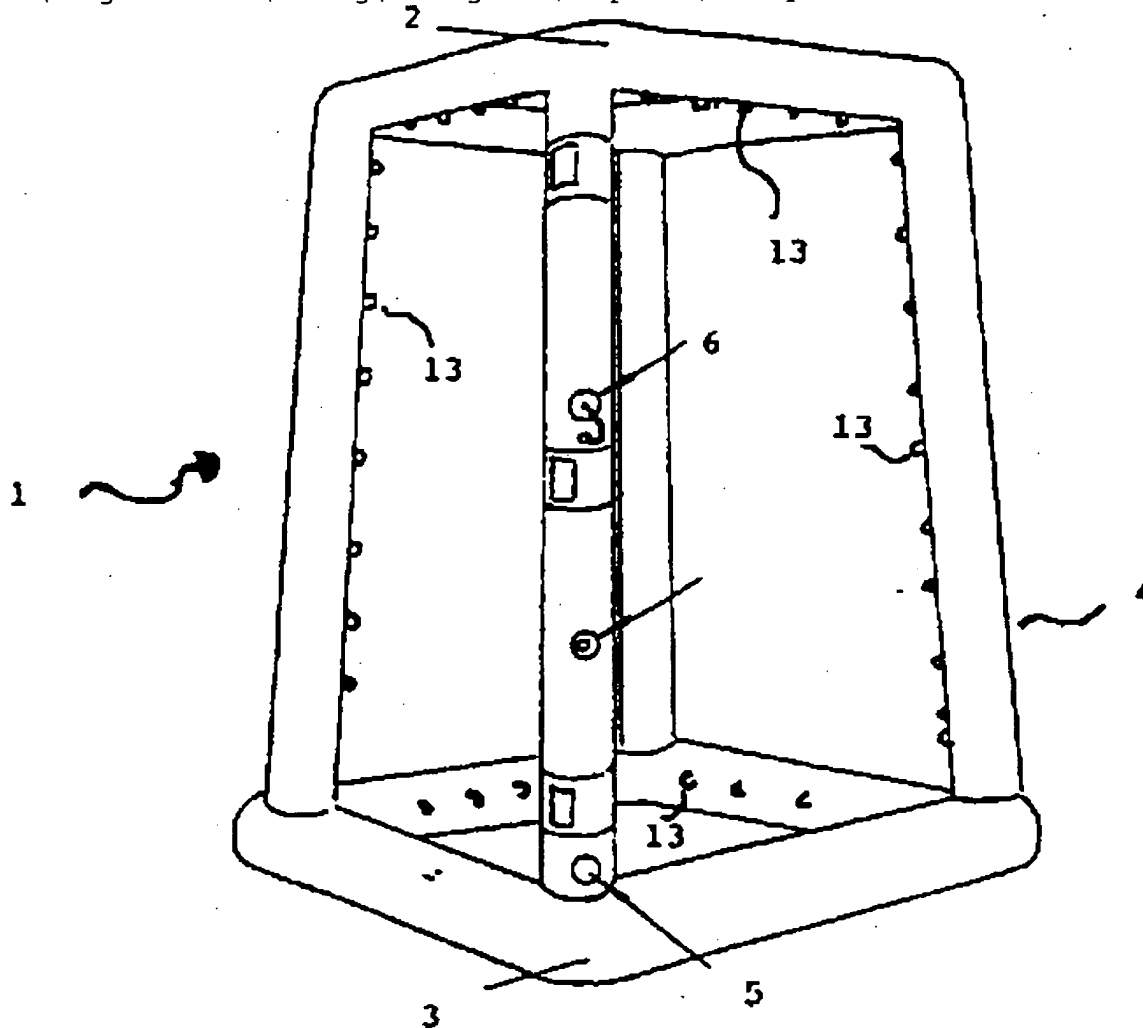
further component (eg an enclosure, not shown) is provided, for attachment to the sleeve, the component also having attached to it at least two fastening members, each having an eye therethrough for receipt of a flexible rod. The structure may be formed from PVC, sleeves (2,3,4) being joined by RF welding.

USE - May be used as a decontamination shower, after handling dangerous chemicals, in domestic swimming pools, as life raft, e.t.c.

ADVANTAGE - Is sturdy enough to withstand hazardous environments without piercing or splitting. Can have standard fittings such as press studs fastened to it.

Dwg.1/2

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Derwent Class: A93; Q46

International Patent Class (Main): E04H-015/20

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A04-E02E1; A11-C01A; A12-R02

12/19/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011055147 \*\*Image available\*\*

WPI Acc No: 1997-033071/199703

XRAM Acc No: C97-010273

XRPX Acc No: N97-027915

**Rigidisable inflatable structure for ground or space use - has space frame bonded to inflatable enclosure frame is of rods with heat-activatable mixt. of reinforcing fibres and binder in braided or heat-shrink outer sheath**

Patent Assignee: TRACOR INC (TRCR )

Inventor: SALLEE B T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5579609	A	19961203	US 94258850	A	19940610	199703 B

Priority Applications (No Type Date): US 94258850 A 19940610

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5579609	A	13	E04B-001/32	

US 5579609 A 13 E04B-001/32

Abstract (Basic): US 5579609 A

The rigidisable inflatable structure has a space frame bonded to an inflatable enclosure and consisting of at least one rod (14) formed by reinforcing fibres mixed with binder and contained in an outer contracting sheath (20) to compress the mixt. (22) during curing by using a heating element (24), pref. an electrical resistance heater or pyrotechnic fuse material. The enclosure is pref. of 'Mylar' (RTM) or 'Kapton' (RTM), the fibres are of 'Kevlar' (RTM), and the binder is of thermoplastic fibres, e.g. nylon or PEEK. The sheath is pref. of braid or heat-shrinkable tubing. Also claimed is a structure with bundles of reinforcing fibres mixed with binder and applied to the inflatable structure, and a method of deploying a structure by inflating the enclosure and activating at least one support element coupled to it.

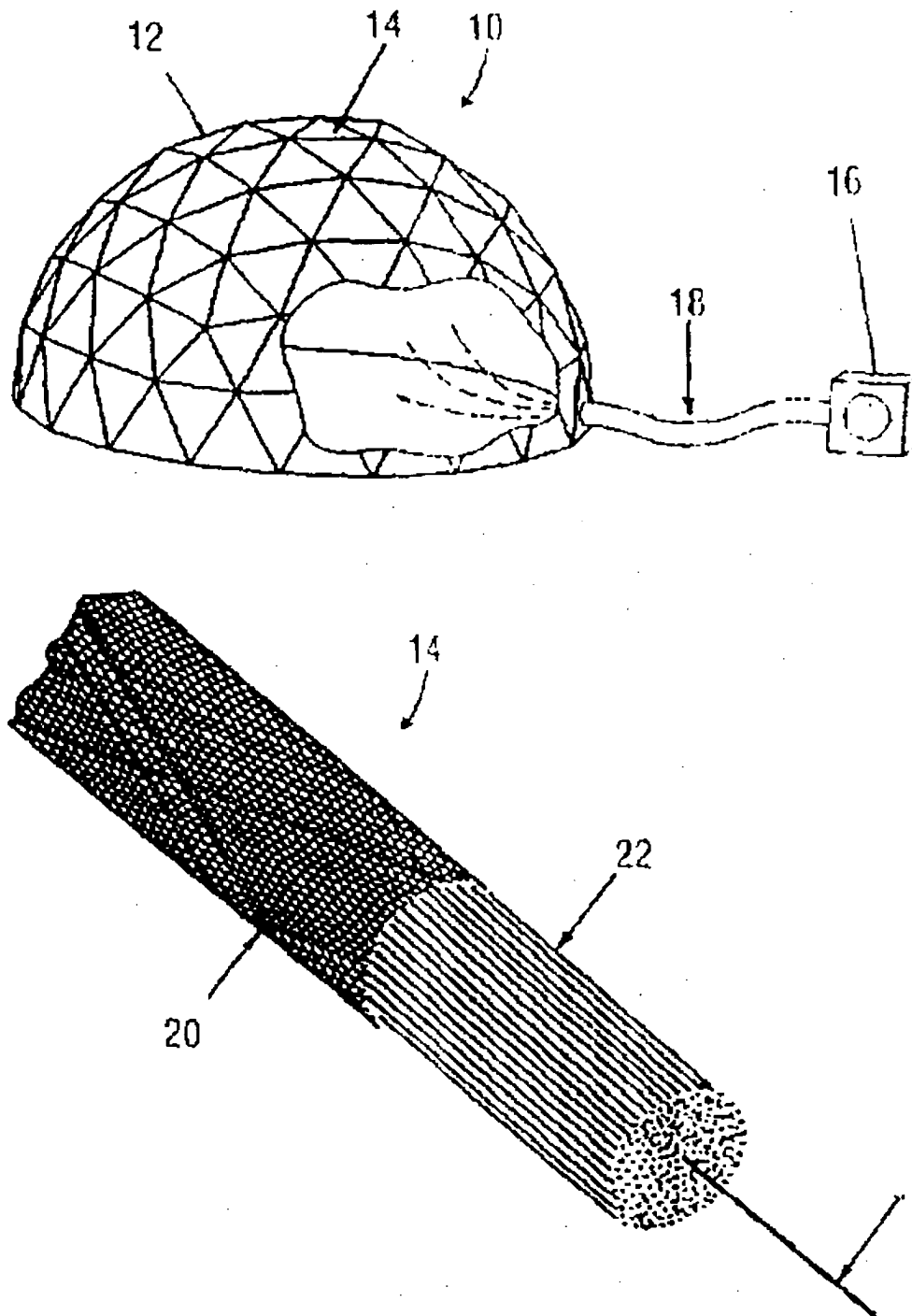
USE - For terrestrial use as e.g. a shelter or antenna component, or as a decoy, high-gain antenna or structural truss in a space or missile environment.

ADVANTAGE - Easily deployed high-strength structure which retains structural integrity without requiring continuous pressurisation and does not require high pressure for rigidising, has high strength to wt. ratio and can be folded compactly for storage and transport.

Dwg.2/8

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Derwent Class: A93; A95; Q43  
International Patent Class (Main): E04B-001/32  
File Segment: CPI; EngPI  
Manual Codes (CPI/A-N): A12-R; A12-T03D

12/19/8 (Item 8 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

009475942     \*\*Image available\*\*

WPI Acc No: 1993-169477/199321

XRPX Acc No: N93-129770

**Stretcher for handling invalid - comprises inflatable structure forming load bearing bridge cooperable with flexible mat and having handles**

Patent Assignee: MANGAR AIDS LTD (MANG-N)

Inventor: FLETCHER R E

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2261605	A	19930526	GB 9224127	A	19921117	199321 B

Priority Applications (No Type Date): GB 9124945 A 19911123

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
GB 2261605	A	20	A61G-001/013	

Abstract (Basic): GB 2261605 A

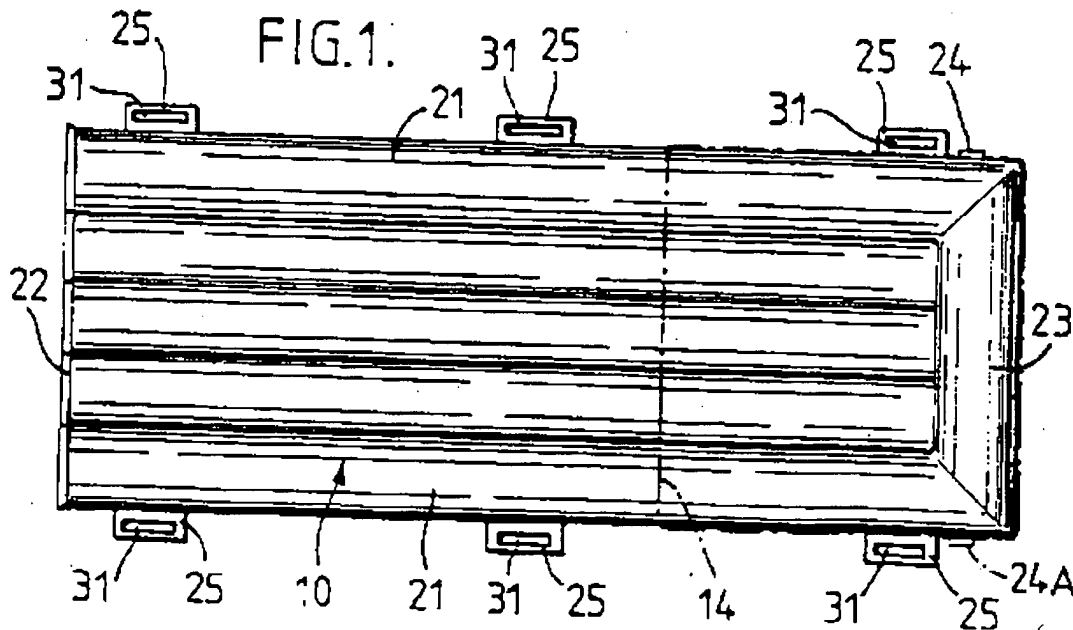
The stretcher comprises an elongate, flexible and **inflatable structure** (10) having handles and stretcher **pole** receiving sockets (25,31) along its longitudinal edges. The **inflatable structure** (10) may also be used with a flexible mat to transfer an invalid from e.g. a bed to a chair.

When inflated, the structure (10) forms a load bearing bridge. One of the surfaces of the structure and one of the surfaces of the mat have coefficients of friction which are less than those of the other of the surfaces of the structure and the panel.

USE - To facilitate the moving of loads such as recumbent persons.

Dwg.1/7

C:\Program Files\Dialog\DialogLink\Graphics\E8.bmp



Derwent Class: P33; Q35

International Patent Class (Main): A61G-001/013

International Patent Class (Additional): A61G-007/10; B65G-011/10

File Segment: EngPI

Serial 10/762413

July 23, 2004

12/19/12 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

002178828

WPI Acc No: 1979-K8777B/197947

**Inflatable structure for balloon or airship - has jointed girder in compression held by flexible cables or jointed rods**

Patent Assignee: FA ZODIAC (ZODI-N)

Inventor: EYMARD M

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2918706	A	19791115				197947 B
GB 2021064	A	19791128				197948
FR 2425378	A	19800111				198008
US 4265418	A	19810505				198121
GB 2021064	B	19820603				198222

Priority Applications (No Type Date): FR 7814093 A 19780511

Abstract (Basic): DE 2918706 A

The **inflatable** elongated **structure** forms the buoyant part of a lighter-than-air flying machine. An envelope (7) encloses a central compression member (2) in the form of a girder made up of several lengths (3) of tube connected by ball joints (4).

Flexible steel wire rope tension members (5) arranged symmetrically around the envelope run from end to end of the girder and are continuously linked to it by diagonal-mesh screens (6a), of woven material. Inflating the envelope thus pulls the structure into shape. The tension members (5) may alternatively consist of jointed rigid lengths.

Derwent Class: Q25

International Patent Class (Additional): B64B-001/04

File Segment: EngPI

12/19/13 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

001890068

WPI Acc No: 1978-B9306A/197810

**Prefabricated rectangular inflatable structure - incorporates tubes with clamped collars and two coverings with insulation**

Patent Assignee: JAHR W (JAHR-I)

Inventor: FRTZSCHE E; PINTERNAGE E K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 128741	A	19771207				197810 B

Priority Applications (No Type Date): DD 195935 A 19761124

Abstract (Basic): DD 128741 A

The frame work (1) for the stretch covering is prefabricated and is square or oblong. **Tubes** with clamped collars (2) are fixed to foundations (5) and inserted in abutment tubing (7), and joined to the stretch covering (3) by means of ties and intermediate stretch covering. A cable tightener (4) in the cable tubing is fixed to foundations.

The inner skin is fixed to the tie **bar** and the stretch covering (3) detachably fixed with outside ties. Openings, entrances/exits and

top covering are provided.

Heat insulation is incorporated, and the collar tubes are inflated by means of valves

Derwent Class: Q43

International Patent Class (Additional): E04B-001/34

File Segment: EngPI

12/19/14 (Item 14 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

001205428

WPI Acc No: 1974-79321V/197446

**Multi compartment inflatable structures - made from continuously superimposed adhesive coated tubing**

Patent Assignee: HUNTER DOUGLAS INT LTD (HUND ); M O H RASMUSSEN (RASM-I); SUOMINEN H S (SUOM-I)

Number of Countries: 012 Number of Patents: 015

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
BE 816792	A	19741016				197446 B
NL 7407730	A	19751212				197601
DE 2429998	A	19760108				197603
NO 7402135	A	19760105				197606
SE 7407756	A	19760119				197607
FI 7401779	A	19760202				197610
FR 2278864	A	19760319				197619
AT 7404776	A	19760415				197620
US 3963549	A	19760615				197626
GB 1460776	A	19770106				197701
CH 583351	A	19761230				197702
CA 1042186	A	19781114				197848
US 31129	E	19830118				198306
DE 2429998	C	19830505				198319
NL 187172	B	19910116				199106 N

Priority Applications (No Type Date): BE 816792 A 19740625

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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BE 816792	A	28		
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Abstract (Basic): BE 816792 A

**Inflatable** panels are made by leading a continuous flexible plastic tube around a conveyor belt stretched between twin driven pulleys.

After the tube has followed one complete circuit of the belt the superimposing surface is treated with  $\geq 1$  stripes of adhesive, symmetrically or assymmetrically disposed. The loop of superimposed coils is severed normal to the conveyor to obtain  $\geq 1$  panel. Ancillary rods may be accommodated within the tubing or in the interfacial space between parallel welds. Esp. for mfr. of panels of assymmetrically linked longitudinal chambers which can be inflated to form a self-supporting shelter. Requires less manipulation than assembly of panels from several independent prefabricated lengths of tubing.

Derwent Class: A35; P13; P73; Q36; Q43; Q44; Q46; Q48

International Patent Class (Additional): A01G-009/16; B29C-017/00;

B29C-024/00; B29C-027/00; B29C-053/74; B29C-065/48; B29D-009/10;

B32B-007/14; B65H-081/00; E04B-001/34; E04H-015/20; E06B-009/26

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A11-B; A11-C01C; A12-R

13/26, TI/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

016262142

WPI Acc No: 2004-420036/200439

Implantable device for improving heart valve function comprises first anchor configured to be secured to heart tissue, second anchor configured to be secured to heart tissue, and interconnecting member connecting first and second anchors

13/26, TI/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

016245123

WPI Acc No: 2004-403016/200438

Inflatable towing wing for use in water sports has line attached to centre of leading edge for re-launching from water

13/26, TI/3 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015950548

WPI Acc No: 2004-108389/200411

Wind resistance control device, for elliptical traction kites, comprises central control line having pre-line attached to pilot and extending into central wire to which suspension lines are fixed

13/26, TI/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

011601011

WPI Acc No: 1998-018139/199802

Baby's cot length and width reducer - comprises transverse member of shock absorbing material fitted across cot and one or more lengthwise members of supple material at sides

13/26, TI/5 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

009281810

WPI Acc No: 1992-409221/199250

Inflatable temporary road sign representing human figure - which comprises base casing forming housing for inflating mechanism and storage space for deflated figure, with hinged cover deployable to allow inflation

13/26, TI/6 (Item 6 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

008490007

WPI Acc No: 1990-377007/199051

Helping young children to learn to walk - involves hollow cone constructed from inflated rubber tubes

13/26, TI/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
008239679

WPI Acc No: 1990-126680/199017

Ground anchor fixing method - using charge lowered through tube inserted  
in ground to make cavity for anchor rod concrete

13/26, TI/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
007438812

WPI Acc No: 1988-072747/198811

Righting mechanism for capsized boats - comprises inflatable buoyancy  
bags on mast and pivotable counterweight arms on underside of hull

13/26, TI/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
007114010

WPI Acc No: 1987-114007/198716

Connectors zero insertion force contact arrangement - uses expandable  
tubing which presses flexible tape e.g. polyimide into contact with card

13/26, TI/10 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
004730849

WPI Acc No: 1986-234191/198636

Lamp standard for illuminating large area - comprises inflatable pillar  
supporting diffusing reflector above spot light mounted at ground

13/26, TI/11 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
004647405

WPI Acc No: 1986-150748/198624

Inflatable reflection screen for photography - has rigs and lined panels  
and with screen covering secured by press fasteners

13/26, TI/12 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
004038410

WPI Acc No: 1984-183952/198430

Inflatable closure or screen for refrigerated display cabinet - is  
maintained at height on lightweight supports to exclude radiation

13/26, TI/13 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
001759924

WPI Acc No: 1977-K6434Y/197748

Pneumatic orthopaedic support device - has distorting tubes with flat  
parallel walls when deflated and rigid pins extending from mechanical support

14/19/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
001969809

WPI Acc No: 1978-K9084A/197850

**Indoor golf training apparatus - has mirror fixed near ball and optical system to ensure correct stance when driving into net**

Patent Assignee: GOUBAUX P (GOUB-I)

Inventor: GOUBAUX P

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2382907	A	19781110				197850 B

Priority Applications (No Type Date): FR 777308 A 19770311

Abstract (Basic): FR 2382907 A

The appts. is used indoors to provide **golf** training, an optical system ensuring that the golfers stance is correct. It comprises a baseplate for teeing up the ball and a net positioned over an **inflatable structure** forming a tunnel.

The baseplate (1) is Y-shaped, one side (11) having a line (111) for the left foot. The opposite side (12) has several lines (121, 122, 123) for the right foot, depending on the iron used. At the front (13) is an axial line (130) and several more lines (131, 132, 133) at 90 deg corresponding to the iron used. A convex mirror (31) near the ball is used with another similar larger mirror to provide an alignment

Derwent Class: P36

International Patent Class (Additional): A63B-069/36

File Segment: EngPI

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200446

File 347:JAPIO Nov 1976-2004/Mar(Updated 040708)

Set	Items	Description
S1	45636	INFLATE? ? OR INFLATING OR INFLATABLE
S2	1198169	RACK? ? OR STAND? ? OR FRAME OR FRAMES OR FRAMEWORK
S3	564258	EXTENSION? ? OR ELL OR ELLS OR "ADD-ON" OR ADDITION? ?
S4	185	S1(1W)S2:S3
S5	7	S4(S)S2(S)S3
S6	685	S1(3N)S2:S3
S7	16	S6(S)S2(S)S3
S8	9	S7 NOT S5
S9	33252	TRAINING
S10	1	S1()S9
S11	4042	GOLF AND SWING??? OR GOLFSWING? ?
S12	4	S1 AND S11
S13	79	GOLF AND S1
S14	114056	TRAIN???
S15	121720	AID? ?
S16	6	S13 AND S14:S15
S17	5	S16 NOT S12

5/26,TI/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

009933322

WPI Acc No: 1994-201034/199425

Case with base and lid parts hinged together - has intermediate shelf,  
inflatable extension as armrest or backrest, and legs

5/26,TI/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

008271423

WPI Acc No: 1990-158424/199021

Emergency buoyancy system - has mechanical system for extending bag  
perimeters, or includes inflatable framework

5/26,TI/6 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

05953433

CUSHIONING PAD IN FORM OF CONTINUOUS BAGS AND PRODUCTION THEREOF

5/26,TI/7 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

00594317

MOVABLE WEIR OF FLEXIBLE MEMBRANE WITH ANT-OSCILLATION DEVICE

5/19/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

011007911 \*\*Image available\*\*

WPI Acc No: 1996-504861/199650

XRPX Acc No: N96-425447

Inflatable air supported frame structure for producing tents - has frame



**made up of more than one elongated inflatable air chambers to which are coupled restraints**

Patent Assignee: HALE G A (HALE-I); HALE T A (HALE-I)

Inventor: HALE G A; HALE T A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5570544	A	19961105	US 94337077	A	19941110	199650 B

Priority Applications (No Type Date): US 94337077 A 19941110

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5570544	A		9 E04H-015/20	

Abstract (Basic): US 5570544 A

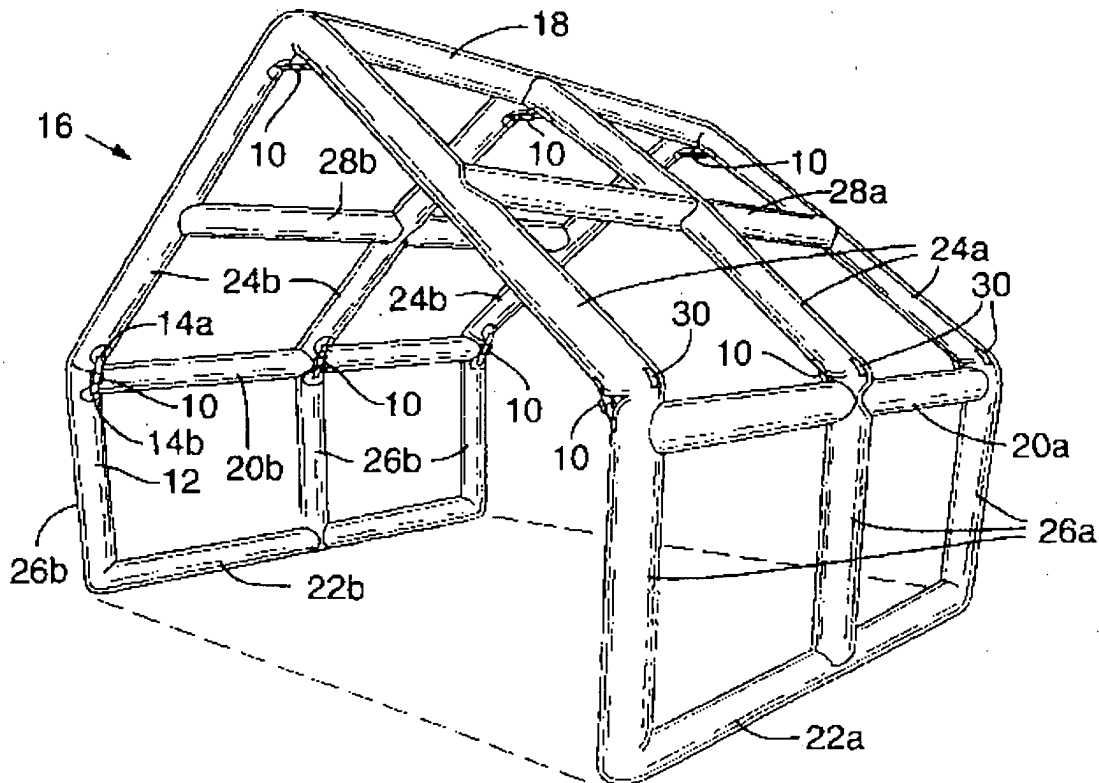
The **inflatable frames** are composed of one or more elongated inflatable air chambers to which are coupled plural restraints that prevent full **extension** of components of the **frame** upon inflation. The restraints cause the **inflated frame** to kink and form an angle at the location of the restraints. Consequently, the restraints work to define angled portions of the **frame**.

The restraints may be adjusted to alter the configuration of the frame.

**ADVANTAGE** - One can stabilize the structure on uneven terrain or to cause the frame to assume multiple conformations.

Dwg. 1/7

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Derwent Class: Q43; Q46

International Patent Class (Main): E04H-015/20

International Patent Class (Additional): E04B-001/34

File Segment: EngPI

5/19/3 (Item 3 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
008412828 \*\*Image available\*\*  
WPI Acc No: 1990-299829/199040  
XRPX Acc No: N90-230602

**Trampoline for small children - has trampoline surfaces secured to frame by elasticated lacing**

Patent Assignee: FRANCIS A C (FRAN-I)

Inventor: FRANCIS A C; TAYLOR D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2229645	A	19901003	GB 905116	A	19900307	199040 B

Priority Applications (No Type Date): GB 895190 A 19890307; GB 905116 A 19900307

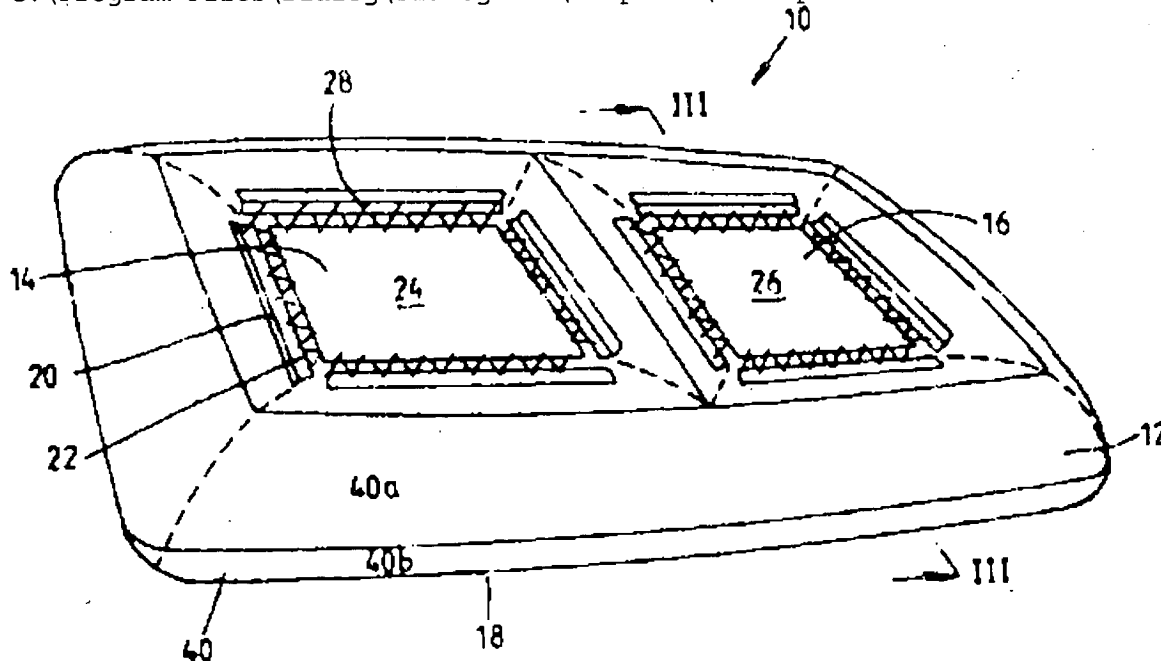
Abstract (Basic): GB 2229645 A

The trampoline has an inflatable frame (12) which surrounds one or more spaces (14,16) across which trampolining surfaces (24,26) extend. Edges of the trampolining surfaces (24,26) are attached to the inflatable frame (12) so that when the frame (12) is inflated the trampoline surface (24,26) is stretched and supported by the frame (12) to permit trampoline use.

The trampolining surfaces (24,26) are secured to the frame (12) by means of elasticated lacing (28) passing sequentially through a series of eyelets arranged around the circumferences of the trampolining surfaces (24,26) and a similar series of eyelets arranged along the length of extensions (22) of panels (20) attached to surfaces of the inflatable frame (12) which surround the spaces (14,16).

USE - A trampoline (10) which is particularly appropriate for use by small children or other inexperienced users. (10pp Dwg.No. 1/3

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Derwent Class: P36  
International Patent Class (Additional): A63B-005/11  
File Segment: EngPI

5/19/5 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
001475367  
WPI Acc No: 1976-D8274X/197617

**Tent with lightweight support structure - with electric ignition and filled with combustible material**

Patent Assignee: MILLERIOUX B (MILL-I)  
Number of Countries: 004 Number of Patents: 004  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2542457	A	19760415				197617 B
FR 2298980	A	19761001				197649
GB 1502139	A	19780222				197808
IT 1046895	B	19800731				198046

Priority Applications (No Type Date): FR 7432393 A 19740926  
Abstract (Basic): DE 2542457 A

The easily assembled tent comprises at least three modules or units (3, 4, 5) of equal size with curved edges fitted with a double roof or fly-sheet separated from the actual roof by several webs. The convex arcs are used level with the connecting line of the tent side panels which form the two adjoining modules without any rigid, flexible or **inflatable frame** member assisting in the formation of the convex arcs through contact with the tent. The tent is fastened to the ground by anchorage points (6) in an **extension** of the seams or welded points which connect the tent sides together. The roof element is such that when the tent is stressed along the upper part of each modulo a large interior space is formed, and outwardly aligned arcs (1) are formed.

Derwent Class: P24  
International Patent Class (Additional): A45F-001/00  
File Segment: EngPI

8/26, TI/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
015044092  
WPI Acc No: 2003-104608/200310

**Sofa has pull-out bed frame extension with inflatable mattress**

8/26, TI/5 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
007080711  
WPI Acc No: 1987-080708/198712

**Caravan front extension tent - comprises inflatable air chambers forming sections secured between frame rails**

8/26, TI/8 (Item 8 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
001720773  
WPI Acc No: 1977-F7264Y/197728

**Printing rig for concave surfaces - has elastic printing sheet depressed to touch surface by ballooning compressed air bag**

8/26,TI/9 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.  
04057823  
**HEAD REST PROVIDED WITH AIR BAG DEVICE**

8/19/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
016008880 \*\*Image available\*\*  
WPI Acc No: 2004-166731/200416  
XRPX Acc No: N04-132854

**Pontoon paddle boat used when e.g. fishing, recreational boating, has detachable paddle wheel and crank assembly attached on two inflatable pontoons, and frame pieces individually installed on pontoons**

Patent Assignee: COLEMAN CO INC (COAE )  
Inventor: METZGER A T; WU S T  
Number of Countries: 001 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6691633	B1	20040217	US 2002224550	A	20020820	200416 B
US 20040035344	A1	20040226	US 2002224550	A	20020820	200416

Priority Applications (No Type Date): US 2002224550 A 20020820

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6691633	B1	13	B63B-001/00	
US 20040035344	A1		B63B-001/00	

Abstract (Basic): US 6691633 B1

NOVELTY - The boat has a detachable paddle wheel and crank assembly attached to the front anchors (38) provided on two **inflatable** pontoons (22,24). **Frame** pieces (50) are individually installed on the pontoons, and each include front and rear U-shaped pieces (52,54) and front and rear **extensions** that are selectively coupled to each other.

USE - Used when e.g. fishing, recreational boating.

ADVANTAGE - Allows folding of boat small size during transport and storage, thus reducing storage space needed and simplifying transport. Allows adjusting boat to accommodate users of different physical sizes. Ensures comfortable riding on boat.

DESCRIPTION OF DRAWING(S) - The figure shows the isometric view of the pontoon paddle boat.

Inflatable pontoons (22,24)

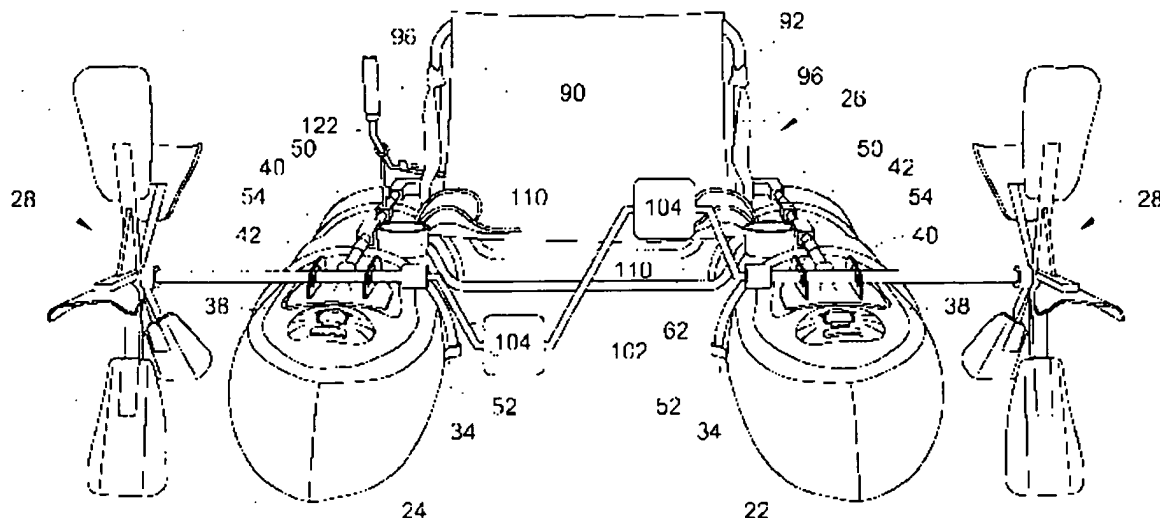
Front anchors (38)

Frame pieces (50)

Front and rear U-shaped pieces (52,54)

pp; 13 DwgNo 1/7

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Derwent Class: Q24  
International Patent Class (Main): B63B-001/00  
File Segment: EngPI

8/19/4 (Item 4 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
007217399  
WPI Acc No: 1987-214407/198731  
XRPX Acc No: N87-160261

**Trapezoidal kite assembly - has equilateral trapezoidal main part with inflatable tubular reinforcements, and includes side parts**

Patent Assignee: JAUCH L (JAUC-I)  
Inventor: JAUCH L  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3523918	C	19870115	DE 3523918	A	19850704	198731 B

Priority Applications (No Type Date): DE 3523918 A 19850704

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3523918	C		3		

Abstract (Basic): DE 3523918 C

The kite can be used for amusement or for competitions. It has an M shaped **frame** (4,5,6,7) formed from **inflatable** flexible tubes. The **frame** supports a thin membrane (10) with triangular **extensions** projecting beyond the outer arms (4,7).

Holes are provided at the apices of these extensions for a control cord. The frame is fitted with an inflation valve V. The frame and membrane, which forms the flying surface, are arranged symmetrically about the central axis (5).

**ADVANTAGE** - The kite has good flying characteristics and can be folded to fit into a waistcoat pocket

Derwent Class: P36  
International Patent Class (Additional): A63H-027/08  
File Segment: EngPI

8/19/6 (Item 6 from file: 350)  
DIALOG(R) File 350:Derwent WPIX

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002143347

WPI Acc No: 1979-G3283B/197930

**Hydraulic press for laminated plates - has movable platen controlled by expansion and contraction of inflatable element retained by frame**

Patent Assignee: DUVELIUS R (DUVE-I)

Inventor: DUVELIUS R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
BE 874939	A	19790716				197930 B

Priority Applications (No Type Date): BE 874939 A 19790319

Abstract (Basic): BE 874939 A

Laminated plates are produced on a press having two horizontal platens, one of which at least can be moved relatively to the other, so that articles can be compressed in the space between them. During the relative motion, the one platen is displaced by the change in the volume of a hollow flexible element controlled by the feeding and exhaust of a fluid under pressure. The hollow flexible element is located between a supporting surface and the undersurface of the platen.

The hollow element is an inflatable vessel which contacts the platen over an extended zone of its area. The **frame** of the **inflatable** vessel ensures that in the zone which is not supported by the platens, and in which only tensile stresses occur, there are no deflective forces. In **addition**, the air cannot be prevented from penetrating the system, which acts as an accumulator.

Derwent Class: P71; P73

International Patent Class (Additional): B30B-000/00; B32B-000/00

File Segment: EngPI

8/19/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001960427

WPI Acc No: 1978-J9700A/197845

**Support frame and swimming pool cover - has tubular extension struts braced against inflatable sphere on water surface**

Patent Assignee: SORRENTINO A (SORR-I)

Inventor: SORRENTINO A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4122562	A	19781031				197845 B

Priority Applications (No Type Date): US 77798366 A 19770519

Abstract (Basic): US 4122562 A

The pool cover is for a circular swimming pool. The cover comprises a pool frame and a sheet which fits over the frame. The frame includes a central ring and tubular extensions pivotally coupled to the ring. A floatation member fits into the ring and floats on the water to support at least part of the weight of the frame and sheet.

Tubular supports are each adapted to be secured to a respective one of the extensions and secured to the perimeter of the pool. The tubular supports include spring loaded buttons and are secured to the tubular extensions and to the pool perimeter by the spring loaded buttons which fit into holes provided in the tubular extensions and holes in the pool

perimeter.  
Derwent Class: Q46  
International Patent Class (Additional): E04H-003/19  
File Segment: EngPI

10/19/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
015142261 \*\*Image available\*\*  
WPI Acc No: 2003-202788/200320  
XRPX Acc No: N03-161516

**Training ball with expander for personal training has an inflatable training roller and two connectors which attach to the expander and knob for altering the force intensity**

Patent Assignee: CHEN C (CHEN-I); LIN C (LINC-I)  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 20218177	U1	20030206	DE 2002U2018177	U	20021123	200320 B

Priority Applications (No Type Date): DE 2002U2018177 U 20021123

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 20218177	U1	16	A63B-021/02		

Abstract (Basic): DE 20218177 U1

NOVELTY - The training ball has an **inflatable training roller** (10) and two connectors (20) which attach to the expander (30). The roller has a cylindrical shape with an axial hole (100) and a spindle strut (11) which is mounted at both ends of the training roller. The expander has a disc-shaped shell with a lead (31) with a fixed hand grip (32). On the shell of the expander is a rotating knob (300) which can regulate the pulling force of the expander. A hollow area (20) in the expander has an opening (202) with a guided recess (204).

USE - For personal training.

ADVANTAGE - Training ball function combined with expander so that one piece of equipment is more versatile.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of the training device.

**Inflatable training roller** (10)

Spindle strut (11)

Connectors (20)

Hollow area (20)

Expander (30)

Lead (31)

Hand grip (32)

Axial hole (100)

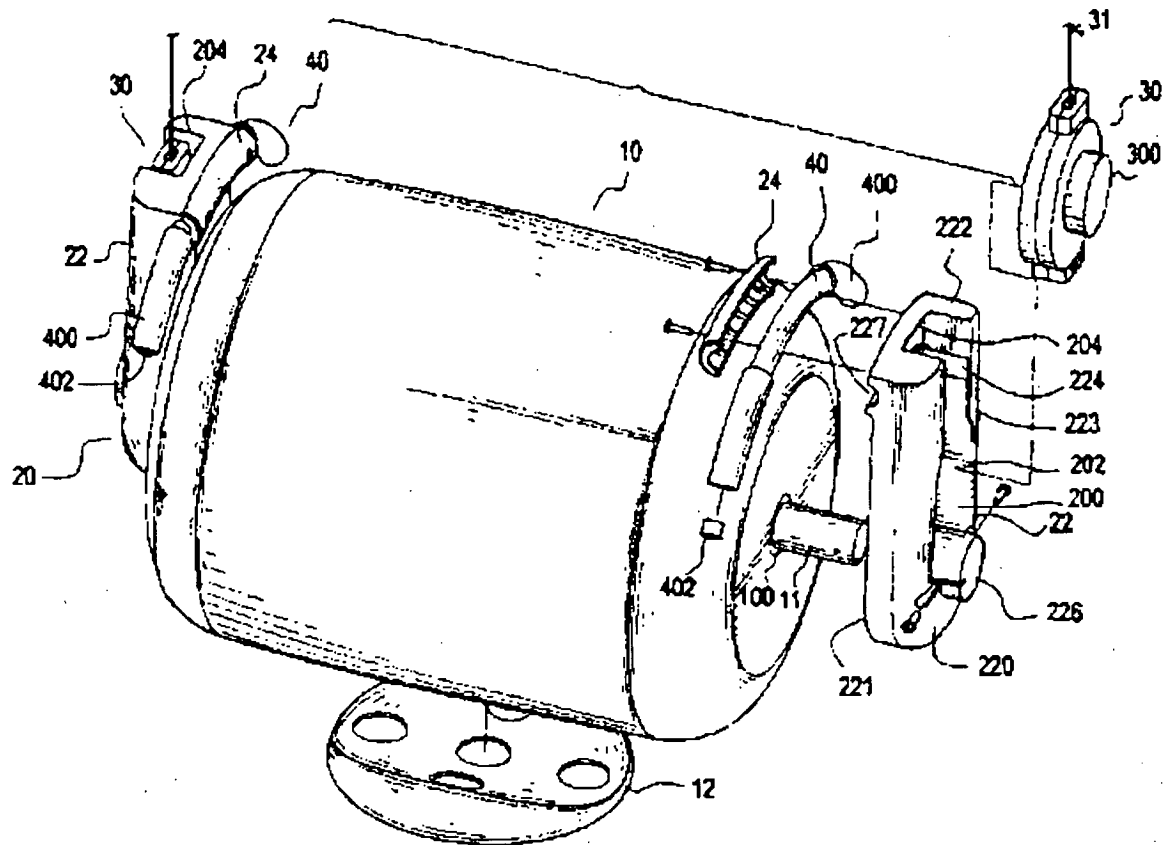
Opening (202)

Recess (204)

Rotating knob (300)

pp; 16 DwgNo 1/7

C:\Program Files\Dialog\DialogLink\Graphics\B6.bmp



Derwent Class: P36  
International Patent Class (Main): A63B-021/02  
International Patent Class (Additional): A63B-021/055  
File Segment: EngPI



File 348:EUROPEAN PATENTS 1978-2004/Jul W02

File 349:PCT FULLTEXT 1979-2002/UB=20040715,UT=20040708

Set	Items	Description
S1	28241	INFLATE? ? OR INFLATING OR INFLATABLE
S2	535787	RACK? ? OR STAND? ? OR FRAME OR FRAMES OR FRAMEWORK
S3	998000	EXTENSION? ? OR ELL OR ELLS OR "ADD-ON" OR ADDITION? ?
S4	381104	BAR OR BARS OR ROD OR RODS
S5	2028	IC=A63B-069
S6	96	S1()S2:S4
S7	5	S6(20N)S2(20N)S3
S8	0	S5 AND S7
S9	0	S5 AND S6
S10	31	S1 AND S5
S11	108478	S2(S)S3:S4
S12	4	S1(S)S11 AND S5
S13	3	S10(S)S2(S)S4
S14	0	S13 NOT S12
S15	27	S10 NOT (S7 OR S12)
S16	3	S1(S)S2(S)S4 AND S5
S17	0	S16 NOT (S7 OR S12)
S18	52	S1()S3:S4
S19	1	S2(10N)S18 [a duplicate]
S20	0	S S1(3N)S4
S21	218	S1(3N)S4
S22	15	S2(S)S21
S23	15	S22 NOT (S7 OR S12 OR S15)
S24	192815	EXTENSION? ? OR ELL OR ELLS
S25	29	S1(S)S2(S)S3(S)S4
S26	27	S25 NOT (S7 OR S12 OR S15 OR S22)
S27	19	S1(S)S2(S)S4(S)S24
S28	19	S27 NOT (S7 OR S12 OR S15 OR S22)

7/6/1 (Item 1 from file: 348)

01443180

Sleeping means

7/6/2 (Item 2 from file: 348)

01080079

ENDOVASCULAR GRAFT

7/6/3 (Item 3 from file: 348)

00395696

Conveyor.

7/6/4 (Item 4 from file: 348)

00237684

Liftable axle with load control.

7/3,AB/5 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00158418

COMPOSITE BICYCLE FRAMES AND METHODS OF MAKING SAME

CADRES DE BICYCLETTE COMPOSITES ET PROCEDES DE PRODUCTION

Patent Applicant/Assignee:

TRIMBLE Brent J,

Inventor(s) :

TRIMBLE Brent J,

Patent and Priority Information (Country, Number, Date) :

Patent: WO 8904789 A1 19890601

Application: WO 88US4006 19881118 (PCT/WO US8804006)

Priority Application: US 87338 19871120; US 88631 19880616

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AT AT AU BE BJ BR CF CG CH CH CM DE DE DK FI FR GA GB GB HU IT JP KP LK  
LU LU MC MG ML MR MW NL NL NO RO SE SE SN SU TD TG US

Publication Language: English

Fulltext Word Count: 16958

English Abstract

Disclosed is an improved bicycle frame of composite materials and a method of molding generally hollow components and assemblies for such a bicycle frame. The entire bicycle frame may be one integrally united piece of molded composite materials, such as unidirectional structural fibers impregnated with a heat curable synthetic resin. Layers of the composite material may be shaped to form an uncured frame shell. This shell is compressed against the surfaces of a mold (12) by an internal pressing member, such as an **inflatable** bladder (60, 61) routed to the outside through a passageway (65) passing through the mold. The shell is then cured while under compression in the mold.

Fulltext Availability: Detailed Description

12/3,AB,K/3

DIALOG(R)File 349:PCT FULLTEXT

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00144306

**APPARATUS FOR TENNIS BALL SERVICE**

**APPAREIL DISTRIBUANT DES BALLES DE SERVICE DE TENNIS**

Patent Applicant/Assignee:

KOVACS Ferenc,  
JUHASZ Laszlo,  
SZMEJKAL Attila,  
LIPTAY Rudolf,

Inventor(s) :

KOVACS Ferenc,  
JUHASZ Laszlo,  
SZMEJKAL Attila,  
LIPTAY Rudolf,

Patent and Priority Information (Country, Number, Date) :

Patent: WO 8801188 A1 19880225

Application: WO 87HU33 19870811 (PCT/WO HU8700033)

Priority Application: HU 352086 19860811

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AT AU BE CH DE FR GB IT JP LU NL SE US

Publication Language: English

Fulltext Word Count: 3770

English Abstract

An apparatus for ball service in tennis comprising a ball container, a ball feeder and launching mechanism and a control unit. According to the invention, a micro-computer (4) in the control unit is provided and a

keyboard (5) is connected to the micro-computer (4) of the control unit.  
Main International Patent Class: **A63B-069/38**  
Fulltext Availability: Detailed Description  
Detailed Description

... the rotational speed of inner frame 3Lv into the micro-computer 4.  
L 5 Outer frame 32 is rotatably arranged in hous-ino, 33 at axle 4L. The drive for outer frame 32 is the same as for inner frame 3L with motor 36, toothed wheel LO and Cooperating toothed bar 37 as -weLL as with code disk  
The axles 35 and 41L are PITToted in...  
...coLLector is made of a flexible but air tight material so that it can be inflated . Means for the inflation and a stroing space for the "empty" bal L coLLector are...

15/6/2 (Item 2 from file: 348)  
00877675  
Liquid resistance system for use with exercise apparatus

15/6/4 (Item 4 from file: 348)  
00508509  
WATER RIDE ATTRACTION

15/6/5 (Item 1 from file: 349)  
01103192 \*\*Image available\*\*  
BASKETBALL REBOUNTING PRACTICE DEVICE

15/6/6 (Item 2 from file: 349)  
01101292 \*\*Image available\*\*  
MOVABLE GOALIE

15/6/7 (Item 3 from file: 349)  
01100390 \*\*Image available\*\*  
MARKING OF OBJECTS FOR SPEED AND SPIN MEASUREMENTS

15/6/9 (Item 5 from file: 349)  
00994852 \*\*Image available\*\*  
HOCKEY CHECKING PRACTICE DUMMY

15/6/11 (Item 7 from file: 349)  
00880155 \*\*Image available\*\*  
PUTTING TRAINING MAT

15/6/14 (Item 10 from file: 349)  
00525484 \*\*Image available\*\*  
APPARATUS FOR SOCCER TRAINING

15/6/16 (Item 12 from file: 349)  
00442037 \*\*Image available\*\*  
ACTIVE BALANCE APPARATUS

15/6/18 (Item 14 from file: 349)  
00387169 \*\*Image available\*\*  
STATIONARY EXERCISE SUPPORT FOR A WHEELCHAIR

15/6/20 (Item 16 from file: 349)  
00320676 \*\*Image available\*\*  
PROFESSIONAL BATTING TRAINING SYSTEM

15/6/21 (Item 17 from file: 349)  
00313880 \*\*Image available\*\*  
**PROGRAMMABLE BALL EJECTION MACHINE**

15/6/22 (Item 18 from file: 349)  
00273160  
**BALL GAME USING ELASTIC CORDS**

15/6/23 (Item 19 from file: 349)  
00262899 \*\*Image available\*\*  
**KARATE KICK-BOARD TARGET**

15/6/24 (Item 20 from file: 349)  
00252048 \*\*Image available\*\*  
**PARA-PERIPHERAL SPORTS TRAINING CENTER**

15/6/25 (Item 21 from file: 349)  
00232643 \*\*Image available\*\*  
**LIGHTED BALL**

15/6/26 (Item 22 from file: 349)  
00163781 \*\*Image available\*\*  
**SPORTS IMPACT MEASURING APPARATUS**

15/6/27 (Item 23 from file: 349)  
00121775  
**REBOUND NET**

15/3,AB,K/3 (Item 3 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.  
00726592

**SOFT SWORD AND SOFT ROD**  
**BIEGSAMES SCHWERT UND STAB**  
**EPEE ET BATON SOUPLES**  
**PATENT ASSIGNEE:**

Tanabe, Tetsundo, (2037960), 2-16-17, Kaminagaya, Konan-ku,  
Yokohama-shi, Kanagawa 233, (JP), (Proprietor designated states: all)  
**INVENTOR:**

Tanabe, Tetsundo, 2-16-17, Kaminagaya, Konan-ku, Yokohama-shi, Kanagawa  
233, (JP)

**LEGAL REPRESENTATIVE:**

Weiss, Peter, Dr. rer. nat. (52215), Dr. Weiss, Weiss & Brecht  
Zeppelinstrasse 4, 78234 Engen, (DE)

**PATENT (CC, No, Kind, Date):** EP 713716 A1 960529 (Basic)  
EP 713716 A1 961211.  
EP 713716 B1 011219  
WO 9524951 950921

**APPLICATION (CC, No, Date):** EP 95912423 950315; WO 95JP439 950315

**PRIORITY (CC, No, Date):** JP 9443926 940315; JP 94215916 940909; JP 94287956  
941122

**DESIGNATED STATES:** DE; FR; GB

**INTERNATIONAL PATENT CLASS:** A63B-069/02 ; A63H-033/00; F41B-015/02

**ABSTRACT EP 713716 A1**

A bag-shaped sword blade section having a throttled opening formed of a

Serial 10/762413

July 23, 2004

sealing and elastic material such as rubber is fitted onto and closely attached to a tip end of a cylindrical-shaped grip formed of a hard material such as wood, a hard rubber, plastics and metals. A gas such as air is filled in the sword blade section to define a cavity. Accordingly, a soft sword is made uniform in quality, and undergoes less degradation in quality even after an extended use. (see image in original document)

ABSTRACT WORD COUNT: 100

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	1090
CLAIMS B	(English)	200151	1060
CLAIMS B	(German)	200151	1004
CLAIMS B	(French)	200151	1174
SPEC A	(English)	EPAB96	5299
SPEC B	(English)	200151	5326
Total word count - document A			6390
Total word count - document B			8564
Total word count - documents A + B			14954

...SPECIFICATION

Furthermore the US-A-2 669 062 shows a toy sword having a soft **inflated** blade portion, so that the sword may be used in sham fighting and other games...

15/3,AB,K/8 (Item 4 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01094794

PROPRIOCEPTIVE/KINESTHETIC APPARATUS AND METHODAPPAREIL ET METHODE D'ENTRAINEMENT PROPRIOCEPTIF/KINESTHESIQUE

Patent Applicant/Inventor:

ELBAZ Avi, 11 HaPisga Street, 86000 Dimona, IL, IL (Residence), IL  
(Nationality)

MOR Amit, 9 Smilanski Street, 76446 Rehovot, IL, IL (Residence), IL  
(Nationality)

Legal Representative:

KLEIN David (agent), Dekel Patent Ltd., Beit HaRof'im, 18 Menuha VeNahala  
Street, Room 27, 76209 Rehovot, IL,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200416321 A2-A3 20040226 (WO 0416321)

Application: WO 2003IL668 20030812 (PCT/WO IL03000668)

Priority Application: US 2002222992 20020819; US 2003397419 20030327

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD  
SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 5026

English Abstract

Proprioceptive or kinesthetic exercise methods and apparatus are described. In one embodiment, a proprioceptive treadmill is described that comprises a foot-contact running surface that rotates about a pair of spaced pulleys, the running surface comprising at least one protuberance protruding upwards from the running surface. Proprioceptive exercise surfaces, exercise bicycles, steppers, ski machines, rowing machines and elliptic exercise machines are also described.

...International Patent Class: **A63B-069/06** ...

... **A63B-069/18**

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... size/shape. The variable size/shape may be achieved by constructing protuberance 56 from an **inflatable** element, which may be **inflated** pneumatically with air or hydraulically with a liquid (e.g., water or oil). A controller...

...material properties. For example, they may have different or similar resilience or viscosity (in the **inflatable** version) and may be made of different or similar materials.

Protuberances 56 may be movable...

...size/shape. The variable size/shape may be achieved by constructing protuberance 62 from an **inflatable** element, which may be **inflated** pneumatically with air or hydraulically with a liquid (e.g., water or oil). A controller...

...of protuberances 62. Protuberances 62 may have different or similar resilience or viscosity (in the **inflatable** version), and may be made of different or similar materials.

Protuberances 62 may be movable...

Claim

... The exercise apparatus according to claim 4, wherein said at least one protuberance comprises an **inflatable** element.

9 The exercise apparatus according to claim 8, further comprising a controller adapted to...

**15/3,AB,K/12** (Item 8 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00578398

**MARTIAL ARTS PHYSICAL INTERACTION DEVICE AND METHOD**

**DISPOSITIF ET PROCEDE D'INTERACTION PHYSIQUE POUR LA PRATIQUE D'ARTS**

**MARTIAUX**

Patent Applicant/Assignee:

NELSON Mark,

Inventor(s):

NELSON Mark,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200041771 A2 20000720 (WO 0041771)

Application: WO 2000US1134 20000114 (PCT/WO US0001134)

Priority Application: US 99232480 19990115

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB

Serial 10/762413

July 23, 2004

GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA  
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA  
UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU  
TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG  
CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 7896

English Abstract

A physical interaction device includes a controller (110) and one or more arms (102), such as a first arm (102) and a second arm (101). The first arm (102) is movably connected with a first support (104). The first arm includes a first flexible portion sized to physically interact with a first limb portion of a user of the device. The second arm (101) is movably connected with a second support (105). The second arm (101) includes a second flexible portion sized to physically interact with the first limb portion of the user and/or a second limb portion of the user. The controller (110) is linkable with the first arm (102), the second arm (101) and the pitch adjuster (402). The controller (110) is configured to adjust the angle of the first arm (102) and the second arm (101). The controller (110) is configured to selectively cause a first movement of the first flexible portion of the first arm (102). The controller (110) is configured to selectively cause a second movement of the second flexible portion of the second arm (101). The first movement of the first flexible portion of the first arm (102) serves to contact the first flexible portion of the first arm (102) with the user to physically imitate a first human strike toward the user. The second movement of the second flexible portion of the second arm (101) serves to contact the second flexible portion of the second arm (101) with the user to physically imitate a second human strike toward the user.

Main International Patent Class: **A63B-069/00**

Fulltext Availability: Detailed Description

Detailed Description

... one example, referring again to FIGS. 1-3, arm 102 may be formed with an **inflatable**, elastic material such as rubber. In another example, the arm 102 may I 0 be...

**15/3,AB,K/13 (Item 9 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00534224

**BOXING EXERCISE APPARATUS WITH DAMPING ADJUSTMENT****APPAREIL D'ENTRAINEMENT A LA BOXE A AMORTISSEMENT REGLABLE**

Patent Applicant/Assignee:

FITNESS BOTICS INC,

CHU Yong S,

Inventor(s):

CHU Yong S,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9965576 A1 19991223

Application: WO 99US12937 19990609 (PCT/WO US9912937)

Priority Application: US 9898685 19980617

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE  
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK

Serial 10/762413

July 23, 2004

MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN  
YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE  
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN  
GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 5159

English Abstract

A boxing exercise apparatus is mounted on a **stand** (20). A **pivotal support arm** (32) provides a strike absorbing means. In a first embodiment, the support arm is connected to the stand with a spring (42) joined to a rigid **rod** (40). The rigid **rod** (40) is preferably positioned in a neutral position with an integral positioning means. Displacement of the **support arm** away from the neutral position toward a rocked-back position is counteracted by the spring. In a second embodiment, the apparatus further includes a second spring (21) joining segments of the **stand** so as to bias lateral movement of the support arm. When the support arm is deflected the first spring, and the second spring retards the motion of the support arm within two degrees of freedom. A friction adjustment is provided so as to adjust motion stiffness. This adjustment provides a novel approach using a friction washer.

Main International Patent Class: **A63B-069/00**

Fulltext Availability: Detailed Description

Detailed Description

... between the bag and its suspending-**rod** which will allow the bag to be readily **inflated** and yet afford a durable connection capable of surviving the rough usage administered...

**15/3,AB,K/15** (Item 11 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00494079

**SWING PRACTICING APPARATUS****DISPOSITIF SERVANT A PRATIQUER UN SWING DE BASE-BALL**

Patent Applicant/Assignee:

BEERS Michael,

Inventor(s):

BEERS Michael,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9925431 A1 19990527

Application: WO 98US24360 19981116 (PCT/WO US9824360)

Priority Application: US 97972640 19971118

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH  
GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH  
GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES  
FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN  
TD TG

Publication Language: English

Fulltext Word Count: 2818

English Abstract

A swing practicing device trains a hitter, such as a baseball batter, to improve the accuracy and power of his swing. A target is coupled to the terminal end of a target support, the target accepting swing impacts



without separating from the target support. The **target support** extends from a base having a rounded bottom surface, the curves of the rounded surface in rotational engagement with the ground. Swing impacts at the target cause the apparatus to rotate from an upright position to a more horizontal position and then return to the upright position to accept repeated swing impacts. The device can include an **inflatable** air bladder within the target and target support, and can include an adjustable weight for its base. The device can also include an adjusting mechanism to adjust the vertical height of the target.

Main International Patent Class: **A63B-069/00**

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... to the material found in automotive tires. The target support and target can include an **inflatable** bladder in their interior, the **inflatable** bladder providing improved support for accepting swing impacts. The base can incorporate a weight sufficiently...cutaway view. A cavity 21 is depicted in base 20 for accepting additional weight. An **inflatable** bladder 30 is located in the interior of target support 18. Bladder 30 can be...

Claim

... the target support.

2 The device according to Claim 1 wherein the target comprises an **inflatable** bladder.

3 The device according to Claim 1 wherein the target support comprises an **inflatable** bladder.

4 The device according to Claim 1 wherein the base comprises a weight to...  
...baseball shape.

10 An apparatus according to Claim 9 wherein the target support comprises an **inflatable** bladder.

is 11. The apparatus according to Claim 9 wherein the target support and the...

...vertical height of the target.

14 The apparatus according to Claim 13 further comprising an **inflatable** bladder associated with the target support, the **inflatable** bladder for locking the height of the target.

15 A method for practicing a baseball...

15/3,AB,K/17 (Item 13 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00439827

**MULTIPURPOSE TRAINING APPARATUS**

**APPAREIL D'EXERCICE POLYVALENT**

Patent Applicant/Assignee:

HUH Yong Seok,

CHOI Byung Kook,

Inventor(s):

CHOI Byung Kook,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9830291 A1 19980716

Application: WO 97KR260 19971208 (PCT/WO KR9700260)

Priority Application: KR 97298 U 19970111; KR 9721858 U 19970811; KR  
9731467 U 19971108 (KR U; KR U; KR U)

Designated States:

(Protection type is "patent" unless otherwise stated - for applications

prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU  
IL IS JP KE KG KP KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT  
RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH KE LS MW SD  
SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT  
LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 3334

English Abstract

The invention relates to a multipurpose training apparatus which can be used in kicking and punching exercise, basketball game, dart game, and the like. The training apparatus comprises: a base member (10) having a hole (11) vertically penetrating its center; a **column** member (20) which is **inflated** by filling air through air-filling device (21) to be a **pole** shape with a predetermined length, wherein the lower portion of the column member is tightly inserted into the hole of the base member (10); and plurality of striking members (30) which are attached at proper positions of the column member (20) by means of connecting members, wherein the respective **striking members (30) are filled with air** through air-filling device (31). The training device according to the invention has advantages that any user can use it conveniently due to its simple structure.

Main International Patent Class: **A63B-069/00**

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... a possibility of a heightio adjustment. The column member and the striking members can be **inflated** by injection of air.  
Further, the apparatus comprises a dart board or a basket which...  
...used for kicking and punching  
1 5 exercise, the column member and striking members are **inflated** by air while the respective parts are assembled. The column member is set up upright...than upper portion diameter.  
Column 20 is made to a pole shape when it is **inflated** by air. The lower end of column 20 is provided with a fixing portion 22...  
...portion 1 12 of the fixing hole I 1. Next, the fixing portion 22 is **inflated** by air through air-filling device 21 to tightly fasten portion 22 to the lower...  
...pneumatic tires,  
for example, rubber in which fabrics are embedded. Hence column 20 may not **inflate** as a balloon when it is filled with air. The air-filling device 21 can...  
...20.  
4  
Each punching ball 30 is formed of rubber so that it can be **inflated** to a predetermined shape ...42 which is connected to the punching ball 30. This enables the structure to be **inflated** with air as a single body.  
The punching ball 30 may have any other shape...  
...portion 112 of the fixing hole 1 1. In such state, while column 20 is **inflated** by air through the air-filling device 21, the fixing band 41 of the connector...  
...balls 30 are attached at a predetermined position as above described and column 20 is **inflated** , column 20 makes a pole shape with its lower portion tightly fixed to the fixing...

...fixed to the outer surface of column 20 by its selfcontractile force as column 20 **inflates** .

Next, each punching ball 30 can be **inflated** to a desirable size by filling air through air-filling device 3 1. Prior to ball 30 and the connecting spacer 42 are **inflated** by air.

The respective air-filling devices 21, 31 comprises check valves to control air...respective grooves.

Column 20 may have additional air tube 23 in its interior which is **inflated** by air through the air-filling device 2 1. With such structure, the i o...balls 30 can io easily be attached or detached even when column 20 is fully **inflated** with air.

Moreover, users can easily change the respective positions of punching balls, or replace...

Claim

... a base member having a hole vertically penetrating its center;  
a column member which is **inflated** by filling air through air-filling device to be a pole shape with a predetennined...

23/6/1 (Item 1 from file: 348)  
01373529  
OCCUPANT ARRESTING DEVICE

23/6/2 (Item 2 from file: 348)  
01373528  
OCCUPANT ARRESTING DEVICE

23/6/3 (Item 3 from file: 348)  
01373527  
OCCUPANT ARRESTING DEVICE

23/6/4 (Item 4 from file: 348)  
01372813  
CARTRIDGE TYPE PAINTING SYSTEM

23/6/5 (Item 5 from file: 348)  
00270407  
Method and apparatus for alternatng pressure of a low air loss patient support system.

23/6/7 (Item 1 from file: 349)  
01027812 \*\*Image available\*\*  
AUTOMOBILE PET SAFETY SEAT

23/6/8 (Item 2 from file: 349)  
01015941 \*\*Image available\*\*  
METHOD AND SYSTEM FOR PRODUCING LAMINATED BULK BOXES

23/6/9 (Item 3 from file: 349)  
00991960 \*\*Image available\*\*  
FORMED IN PLACE FIXATION SYSTEM WITH THERMAL ACCELERATION

23/6/10 (Item 4 from file: 349)  
00976821 \*\*Image available\*\*  
TENT

23/6/11 (Item 5 from file: 349)  
00932475 \*\*Image available\*\*  
**GREEN TIRE STORAGE DEVICE WITH INFLATABLE BLADDERS**

23/6/12 (Item 6 from file: 349)  
00884410 \*\*Image available\*\*  
**SPACECRAFT SUNSHIELD FOR USE IN PERFORMING SOLAR TORQUE BALANCING**

23/6/13 (Item 7 from file: 349)  
00756575 \*\*Image available\*\*  
**SIDE IMPACT INFLATOR ASSEMBLY WITH EXTERNAL GAS COOLING**

23/6/14 (Item 8 from file: 349)  
00387270 \*\*Image available\*\*  
**PRE-PRESSURIZED IN-LINE SKATE WHEEL**

23/3,AB,X/6 (Item 6 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00110164

**Screen tensioning apparatus.**  
**Siebspannvorrichtung.**  
**Dispositif pour tendre un ecran.**

PATENT ASSIGNEE:

AMERICAN SCREEN PRINTING EQUIPMENT COMPANY, (503321), 1400 West Hubbard  
Street, Chicago Illinois 60622, (US), (applicant designated states:  
DE;FR;GB;IT;SE)

INVENTOR:

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LEGAL REPRESENTATIVE:

Alexander, Thomas Bruce et al , Boulton, Wade & Tennant 27 Furnival Street,  
London EC4A 1PQ, (GB)

PATENT (CC, No, Kind, Date): EP 107951 A2 840509 (Basic)  
EP 107951 A3 850515  
EP 107951 B1 880427

APPLICATION (CC, No, Date): EP 83306320 831018;

PRIORITY (CC, No, Date): US 436855 821026

DESIGNATED STATES: DE; FR; GB; IT; SE

INTERNATIONAL PATENT CLASS: B41F-015/36;

ABSTRACT EP 107951 A2

Screen tensioning apparatus.

A fabric tensioning apparatus for the screen (26) of a screen printing press, comprises telescoped inner and outer members (25 and 30) which can be urged apart by an inflatable air bar (32). The outer member (30) is mounted on legs (81, 82) slidable over a horizontal surface (84) and with the axis of outward movement of the inner member (25) relative to the outer member (30) inclined upwardly relative to the horizontal surface (84). The screen fabric (26) is secured to the outer member (30) while a frame (18) over which the fabric (26) is to be tensioned is secured to the inner member (25). On inflation of the air bar (32) the inner member (25) moves outwardly and upwardly relative to the outer member (30) whereby the fabric (26) is tensioned over the frame (18) which is also urged into intimate contact with the fabric (26).

ABSTRACT WORD COUNT: 153

LANGUAGE (Publication,Procedural,Application): English; English; English

28/6/1 (Item 1 from file: 348)  
00583171  
A METHOD OF INSTALLING A SOIL ANCHOR AND A SOIL ANCHOR

28/6/3 (Item 1 from file: 349)  
01077442 \*\*Image available\*\*  
A MULTI-CHAMBERED PERSONAL SURVIVAL DEVICE AND AN ORALLY INFLATED, FLUSH  
MOUNTED, HYBRID BLADDER

28/6/5 (Item 3 from file: 349)  
00763947 \*\*Image available\*\*  
ARRANGEMENT OF A WORKING PLATFORM

28/6/6 (Item 4 from file: 349)  
00744697 \*\*Image available\*\*  
METHOD OF LINEAR ACTUATION BY INFLATION AND APPARATUS THEREFOR

28/6/7 (Item 5 from file: 349)  
00538202 \*\*Image available\*\*  
MULTI AXIS MARINE PROPULSION SYSTEM

28/6/8 (Item 6 from file: 349)  
00528333 \*\*Image available\*\*  
EARTHSKI DESIGNSTM

28/6/9 (Item 7 from file: 349)  
00514473 \*\*Image available\*\*  
SLEEPER SOFA WITH AN AIR MATTRESS

28/6/10 (Item 8 from file: 349)  
00405430 \*\*Image available\*\*  
ENDOLUMINAL PROSTHETIC BIFURCATION SHUNT

28/6/11 (Item 9 from file: 349)  
00361071 \*\*Image available\*\*  
SEPARATION ASSEMBLY

28/6/12 (Item 10 from file: 349)  
00313017 \*\*Image available\*\*  
PORTABLE, INTEGRATED, UNIVERSALLY ADJUSTABLE POSITION CONTROL SYSTEM

28/6/16 (Item 14 from file: 349)  
00194302 \*\*Image available\*\*  
A METHOD AND APPARATUS FOR COATING THE OUTER SURFACE OF AN ELONGATED BODY  
WITH A LAYER OF CONCRETE

28/6/18 (Item 16 from file: 349)  
00123452  
AIR SUSPENSION SYSTEM

28/6/19 (Item 17 from file: 349)  
00122983  
SLAG CONVEYING ARRANGEMENT

28/3,AB,K/2 (Item 2 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS

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00398649

**Apparatus for remotely controlled movement through tubular conduit.**  
**Apparat zur ferngesteuerten Fortbewegung durch eine rohrformige Leitung.**  
**Appareil pour mouvements telecommandes a travers un conduit tubulaire.**

**PATENT ASSIGNEE:**

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CH;DE;ES;FR;IT;LI;NL;SE)

**INVENTOR:**

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Sherman, Harold G., 32 Braeside Road, Baldwinsville, New York 13027, (US)

**LEGAL REPRESENTATIVE:**

Jackson, Peter Arthur et al (32251), Gill Jennings & Every 53-64 Chancery Lane, GB-London WC2A 1HN, (GB)

**PATENT (CC, No, Kind, Date):** EP 390352 A2 901003 (Basic)  
EP 390352 A3 901114

**APPLICATION (CC, No, Date):** EP 90302394 900307;

**PRIORITY (CC, No, Date):** US 328685 890327

**DESIGNATED STATES:** CH; DE; ES; FR; IT; LI; NL; SE

**INTERNATIONAL PATENT CLASS:** G21C-017/017;

**ABSTRACT EP 390352 A2**

Apparatus for remotely controlled movement through linear and curved sections of a pipe, or other tubular conduit. The apparatus includes a pair of members (44) spaced apart along a common, central axis. Each member carries a plurality of extensible and retractable pneumatic cylinders (14-20) for movement of frictional engagement elements (34-40) into and out of engagement with the interior wall of the pipe. One or more axial drive cylinders (22,24) rigidly connect the spaced members for movement thereof toward and away from one another. The apparatus carries equipment for inspecting, measuring and/or performing other operations on the pipe, and is of simple and economical design, requiring no gimbal joints or other special linkages for movement in the intended manner.

**ABSTRACT WORD COUNT:** 123

**LANGUAGE (Publication,Procedural,Application):** English; English; English

**FULLTEXT AVAILABILITY:**

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	710
SPEC A	(English)	EPABF1	3690
Total word count - document A			4400
Total word count - document B			0
Total word count - documents A + B			4400

...SPECIFICATION axial drive cylinders.

All four cylinders on each of stepping members are actuated for simultaneous **extension** and retraction of the piston **rods**, and the controls preferably may be selectively actuated either automatically or manually. Although pneumatically operated...

...inside surface of the pipe, frictional engagement could be provided by other means, such as **inflatable** elements surrounding the **frame** of each stepping member. The invention is based upon the rigid interconnection of three expansion...

...rotation of the apparatus about an axis transverse to the pipe axis in response to **extension** of the axial drive cylinder(s) during movement through curved pipe sections...

28/3,AB,K/4 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.  
01037956

**DEVICE AND METHOD FOR TRAVERSING CURB IN A WHEELCHAIR**  
**DISPOSITIF ET PROCEDE PERMETTANT DE TRAVERSER UNE BORDURE DE TROTTOIR EN**  
**FAUTEUIL ROULANT**

Patent Applicant/Inventor:

GABRIELI Rutu, 21 Lea Street, 34403 Haifa, IL, IL (Residence), IL  
(Nationality)

Legal Representative:

FRIEDMAN Mark M (agent), Beit Samueloff, 7 Haomanim Street, 67897 Tel  
Aviv, IL,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200365959 A2-A3 20030814 (WO 0365959)

Application: WO 2003IL90 20030205 (PCT/WO IL03000090)

Priority Application: IL 148026 20020205

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG  
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI  
SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 4517

English Abstract

A wheelchair (10) for facilitating unaided ascending or descending a curb or step by a user of the wheelchair (10) has a generally conventional wheelchair body and a lifting assembly (22) deployed for selective actuation to bear on an underlying surface to the rear of the driving wheels so as to apply an advancing and lifting force to the wheelchair body. The lifting assembly (22) is preferably operated by manually supplied energy, and preferably allows folding of the wheelchair.

Fulltext Availability: Claims

Claim

... most prevalent foldable wheelchair design known to the applicant (referred to herein as an "X- frame " structure) has scissor-type supports for the back and seat of the wheelchair which allow...as "forward", "rearward", "transverse", "above", "below" etc.) are all taken to be defined in the frame of reference of a user sitting in the wheelchair. In one particular example, the action...driven mechanisms with suitable step-down transmissions, and fluid-pressure-actuated mechanisms such as directionally inflatable 30 members, hydraulic pistons or pneumatic pistons. Mechanically or fluid-pressure actuated mechanisms are preferred...20 and pistons 22 are preferably chosen such that both actuators are brought to full extension in not more than 20 strokes of the pump, and more preferably in between 5...which actuators 22 retract under action of an internal return spring (not shown). The extensible

**rods** of the pistons preferably terminate in a high-friction pad or block, typically made from...

28/3,AB,K/15 (Item 13 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00253900  
**PORTABLE, INTEGRATED, UNIVERSALLY ADJUSTABLE POSITION CONTROL SYSTEM**  
**SYSTEME DE COMMANDE DE POSITION PORTABLE, INTEGRE ET UNIVERSELLEMENT**  
**REGLABLE**

Patent Applicant/Assignee:

TRUMAN PRODUCTS,

Inventor(s):

BARKER Donald,

HAMMA John,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9402055 A1 19940203

Application: WO 93US6706 19930715 (PCT/WO US9306706)

Priority Application: US 92916636 19920722

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AU BB BG BR CA FI HU JP KP KR KZ LK MG MW NO PL RO RU SD UA AT BE CH DE  
DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN  
TD TG

Publication Language: English

Fulltext Word Count: 16172

English Abstract

By providing position control means (35) cooperatively associated with a support pad (33) with said control means (35) being constructed for arcuately moving the support pad (33) in response to activation by the user, with the position control means (35) and pad (33) peripherally surrounded by a cover (34), a unique, portable, self-contained, unitary, movably adjustable support assembly (21) is attained whereby individuals are able to position the support pad (33) in any desired location or on any surface while being able to automatically raise and/or lower the support pad (33) to any position for comfort and support. In the preferred embodiment, the movably adjustable support assembly (21) is constructed with expandable shroud means (37) integrally connected with the cover (34) in association with the position control means (35) for expanding in response to the arcuate movement of the position control means (35) while being automatically retracted into a folded configuration when the control means (35) is returned to its original position. In addition, the present invention incorporates a single air flow control assembly (22) which is capable of directly controlling two separate and independent movably adjustable support assemblies (21), each of which employ separate control means (23). In this way, individuals with queen or king sized beds are able to employ two separate and independent movably adjustable support assemblies (21) on the single bed for separate and independent control, while employing a single air flow control assembly (22).

Fulltext Availability: Claims

Claim

... hoses 30 and 31 are mounted in order to obtain the desired air flow for **inflating** support assembly 21. In addition, as depicted in FIGURE 15, when air flow control assembly housing 80. In order to provide the



desired air flow for **inflating** both bladder controlled **frame** assembly 35 and panel member 36 of unitary, self-contained support assembly 21, housing 80...virtually vibration free environment is clearly shown. As depicted therein, motor 95 is supported by **frame** 110 through which rotating shaft 97 passes. In most typical prior art constructions, motor 95...

...held by attaching motor 95 to a support position within its housing or by affixing **frame** 110 to the housing. However, by employing this prior art construction, it has been found...

...the present invention, this prior art problem is completely eliminated by suspending motor 95 and **frame** 110 in foam block 111 which is affixed to outlet bearing portion 102 of fan housing 100, while also peripherally surrounding and supportingly holding **frame** 110 and motor 95. In the preferred construction, foam block 111 comprises a substantially toroidal...

...zone 114 which is constructed for peripherally surrounding and securely embracing annular portion 113 of **frame** 110. By employing this construction, motor 95 with **frame** 110 is securely mounted and retained within peripherally surrounding housing 96 for secure, trouble-free...embodiment, the proximal end of . motor 95 is supported by mounting foam pads 175 to **frame** 110 of motor 95, in position for having outwardly extending flanges 176 of portion 164...

...housing 162 extend from the surface of portion 164 into juxtaposed, spaced, cooperating relationship with **frame** 110 of motor 95. However, by sandwiching foam pads 175 between flanges 176 and **frame** 110, any vibration of motor 95 during its use is not transmitted to housing 162...assembly 90 or 91, each valve assembly incorporates a piston 130 which comprises an elongated **rod** 131 which terminates at one end thereof with a substantially flat plate 132. In the preferred embodiment, elongated piston **rod** 131 is axially movable within housing 120, supported for this axial movability by support arm 133.

In addition, spring means 134 is positioned on elongated **rod** 131 between support arm 133 and plate 132. In this way, spring means 134 continuously ...

...extended position (FIGURE 21) to its fully retracted position (FIGURE 23), the opposed end of **rod** 131 is affixed to solenoid 135. In this construction, whenever solenoid 135 is activated, piston 130 is drawn toward solenoid 135 along the axis of **rod** 131, causing plate 132 to be moved into biasing, compressing engagement of spring means 134...

...interengagement with portal 124 of housing 120. In addition, portal cover 138 incorporates a tubular **extension** 139 integrally formed therewith which incorporates a centrally disposed portal 140. Portal 140 of tubular **extension** 139 is completely unobstructed, communicating directly with portal 124 of housing 120. In ...124 of housing 120 is effectively extended to portal 140.

In the preferred embodiment, tubular **extension** 139 comprises an outer diameter which is constructed for mating, secure mounted interengagement with air delivery hose 30. When hose 30 is mounted to tubular **extension** 139, the air exiting portal 124 of housing 20 is delivered to hose 30 for filling bladder control **frame** system 35. In its preferred construction, plate 132 of piston 130 incorporates a soft, ible...

...assembly 91 is the use of a portal cover 147 which differs only in tubular **extension** 148 being constructed with a smaller diameter than tubular **extension** 139. Similarly, portal 149 defined by tubular **extension** 148 also comprises a smaller diameter. Due to the fact that

the air flow required for **inflating** panel member 36 is substantially less than the air flow required for **inflating** bladder control **frame** system 35, the air delivery hose 31 comprises a smaller diameter than air delivery hose 30. As a result, tubular **extension** 148 comprises an outer diameter which corresponds to the inner diameter of hose 31, in order to enable hose 31 to be securely affixed to **extension** 148, thereby providing the desired air flow. - 32 Since the exit portal 149 of portal ...position. One rocker switch is employed to operate the inflation and deflation of bladder control **frame** assembly 35, while the other rocker switch is constructed to operate the inflation and deflation of panel member 36. When the activation of bladder control **frame** assembly 35 is desired, one of the rocker switches would be pressed which is connected... 140 into hose 30. As previously detailed, hose 30 is connected directly to air control **frame** assembly 35. As a result, all of the air flow caused by the operation of motor 95 is directed into bladder control **frame** system 35, causing **frame** member 50 to arcuately pivot relatively to **frame** member 51. As **frame** member 50 pivots, the back supporting portion of support assembly 21 is elevated into the... to be activated, opening portal 140. Once open, all of the air in bladder control **frame** assembly 35 is able to escape back into the atmosphere through portal 140 into valve... with the outside air through enlarged cut out zones 89, the air from bladder control **frame** assembly 35 simply, easily, and automatically exits through the delivery system back to ambient surroundings... discussed in detail, the elastic forces of shroud 37 places compressive forces on bladder control **frame** assembly 35, thereby causing bladder 52 of bladder control **frame** assembly 35 to be forced into its deflated position, simultaneously forcing all of the air... assembly 90, fan blade housing 100 and housing 80. During the inflation of bladder controlled **frame** assembly 35, no inflation of panel member 36 is realized, since portal 149 of portal...valv? assembly 90, no air flow through portal 140 to the bladder conti, 1:: @J **frame** systr.-m 35 is possible since piston 130 is maintained in secure, sealed, biased engagement... 140 and preventing any air flo,,iv therethrough. Once the panel member 36 has been **inflated** to the desired level, the user merely removes the activation force from the rocker switch... that no motor driven suction is required to withdraw the air from either bladder control **frame** assembly 35 or panel member 36. As detailed above, the elastic forces of shroud 37 are sufficient to assure that the bladder control **frame** assembly is completely deflated, when desired, without requiring expensive operational components. Similarly, by the user...

Serial 10/762413

July 23, 2004

File 348:EUROPEAN PATENTS 1978-2004/Jul W02

File 349:PCT FULLTEXT 1979-2002/UB=20040715,UT=20040708

Set	Items	Description
S1	394	INFLATABLE()STRUCTURE? ?
S2	533616	RACK? ? OR POLE OR POLES OR STAND OR STANDS OR COLUMN? ?
S3	192815	EXTENSION? ? OR ELL OR ELLS
S4	491255	ROD OR RODS OR BAR OR BARS OR ARM OR ARMS OR PROTRUBER?NCE? ? OR CROSSBAR? ?
S5	905	INFLAT? (3N) S2:S4
S6	2	S1(S) S5
S7	0	S1(S) S2(S) S3(S) S4
S8	0	S1(S) S2(S) S3:S4
S9	29	S1(S) S2:S4
S10	5	S9/AB,CM,TI
S11	5	S10 NOT S6
S12	23	S9 NOT (S6 OR S10)
S13	3	S1/TI,AB AND S12
S14	0	GOLF(S) S12
S15	0	TRAINING(S) S12
S16	56439	SPORT? ? OR GOLF OR TRAINING
S17	4	S12 AND S16
S18	3	S17 NOT S13
S19	17	S12 NOT (S13 OR S17)

6/3,AB,K/2 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00317316

**PORTABLE EVAPORATIVE COOLING UNIT****ENSEMBLE PORTABLE DE REFROIDISSEMENT PAR EVAPORATION**

Patent Applicant/Assignee:

COOL ZONE PRODUCTS &amp; PROMOTIONS INC,

Inventor(s):

JONES Michael,

HENSLEY Mark,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9535471 A1 19951228

Application: WO 95US7624 19950616 (PCT/WO US9507624)

Priority Application: US 94474 19940617

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AM AU BB BG BR BY CA CN CZ EE FI GE HU IS JP KG KP KR KZ LK LR LT LV MD  
 MG MN MX NO NZ PL RO RU SG SI SK TJ TM TT UA UG UZ VN KE MW SD SZ UG AT  
 BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML  
 MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 4911

English Abstract

A portable indoor and outdoor evaporative cooling unit includes a conduit structure (36) with an inlet and an outlet, an air blower (46), and a plurality of nozzles (64) for emitting water or other evaporating coolant into the air flow. The nozzles (64) connect to a source of water (62) or the like and are positioned in or on the conduit (36) such that sprayed coolant mixes together with the forced air to form a mixture whose temperature drops via evaporative cooling. The outlet directs the

mixture in streams or clouds where persons can immerse themselves or walk through to cool down. Alternative embodiments include an inverted L-shape, a tower and a framework forming a pavilion. One or more porous membranes (60) can be placed along the flow path, particularly at the outlet, with at least one nozzle arranged to soak the membrane. As used at the outlet, the membrane forms a flow restriction for maintaining inflation. The cooling unit is advantageously used for cooling athletes at competitions, fire fighters and the like.

Fulltext Availability: Detailed Description  
Detailed Description

... discharge and also has the advantage of shielding the players against objects thrown from the **stands**.

**Inflatable structure** 100 has outlets 106 and 108 aligned in two rows. In the upper row, each...

11/6/1 (Item 1 from file: 348)  
00107289  
**Screen.**

11/6/3 (Item 2 from file: 349)  
00860688 \*\*Image available\*\*  
**CATHETER HAVING EXCHANGEABLE BALLOON**

11/3,AB,K/2 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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01078599

**WIND RESISTANCE CONTROL DEVICE FOR ELLIPTICAL TRACTION KITES**  
**DISPOSITIF DE CONTROLE DE PRISE AU VENT POUR AILES ELLIPTIQUES DE TRACTION**  
Patent Applicant/Inventor:

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Patent and Priority Information (Country, Number, Date):

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Application: WO 2003FR1875 20030619 (PCT/WO FR2003001875)  
Priority Application: FR 20027592 20020619

Designated States:

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD  
SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: French

Filing Language: French

Fulltext Word Count: 4743

English Abstract

Serial 10/762413

July 23, 2004

The invention relates to a wind resistance control device for elliptical traction kites. More specifically, the invention relates to a device that is used to turn a kite resting on the leading edge thereof over onto its back, to neutralise completely the traction of the kite and to maintain the kite thus without producing any structural deformation and to ensure an immediate and smooth re-ascent of the kite in all navigation configurations. The inventive device comprises a central control line (1) consisting of a pre-line (4) which is attached to the pilot and which extends into a central wire (5). Two suspension lines (7) are fixed to the end of the aforementioned central wire (5) and each of said suspension lines is fixed by means of an anchor point (8) to one of the two supports (9) which are disposed symmetrically on the **inflatable structure** (10), forming the leading edge of the kite (2). The above-mentioned pre-line (4) passes through a guide element (12) of the sliding control **bar** (13) which abuts a stopper knot (14) that is positioned on the pre-line (4). Said control **bar** (13) holds the kite (2) upright into the wind with the sail area parallel to the wind by means of the control lines (15). Moreover, a **rod** (19) reinforces the kite between the two supports (9). Said device is particularly suitable for controlling elliptical kites.

18/3,AB,K/1 (Item 1 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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01083804

**BUILDING STRUCTURES WITH CURVED CONDUITS AND MALE TO FEMALE FASTENERS  
STRUCTURES DE CONSTRUCTION A CONDUITS CINTRES ET FIXATIONS MALES ET  
FEMELLES**

Patent Applicant/Inventor:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200405640 A1 20040115 (WO 0405640)

Application: WO 2003US12129 20030417 (PCT/WO US2003012129)

Priority Application: US 2002393627 20020702; WO 2002US11968 20030416

Parent Application/Grant:

Related by Continuation to: WO 2002US11968 20020416 (CON)

Designated States:

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prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG  
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 19615

English Abstract

A hexagon building structure offset layering system uses hexagon

structures assembled in an offset layering architecture to construct building walls, floors, roofs, and other structures. Six alignments fastening holes (4) are equidistantly spaced and located on interior panels (1) and (2). The holes (4) provide fastener locations for screwing or bolting through the layers of the hexagon. The holes (4) align with an offset layer of hexagons when assembled in the axial direction. Conduit holes (12) are selectively located depending on the fastening technique selected. Hexagon panels providing curved conduits 1000 and 1002, and 1003 which align when assembled 1004. Radiant fluid heating and cooling tubes applied in flooring, walls, and ceilings for sprinkler systems can not be over curved or they will crack and leak. Hexagon 999 conduits can be curved in a wide range of radius to accommodate any tubing requirement. A layer of radiant infrared coatings are applied to the surfaces to manage heat radiating the heat into the room rather than floor. Since hexagon buildings are built from hexagon building structures (7) without customization, hexagon buildings can be rebuilt, modified, or recycled onto a like building using the same materials.

Fulltext Availability: Detailed Description

Detailed Description

... and 436b together eliminating the need for conduit rod 415 insertion. Figure 79 provides flexible rod extensions 440 out of hexagon assemblies in FIGURE 77 and 78 for roof tarps 441, sports net attachments, wide rain collection, and extensions for cable attachment or insertion into conduits. These roof tarps can be layered for insulation...  
...growth buildings or sun rooms. Flexible solar voltaic films are also available to attach to rods. Reflective polymers are available in a wide range of plastics, however polyimide materials are preferred...  
...applications for SRC CPI and CP2 include integration of electric circuits in a flexible film, inflatable structure for reducing from vibration and increasing insulation quality with air or other gases like argon...  
...about by the action of heat. Liquid, gases, and solids can be combines to build inflatable structures that attach to the hexagon structure. SRS's films polyimide thin films that are clear...

18/3,AB,K/2 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00958876

**BUILDING STRUCTURE AND ANALYSIS PROCESS**

**STRUCTURE DE CONSTRUCTION ET PROCEDE D'ANALYSE**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200292927 A2-A3 20021121 (WO 0292927)

Application: WO 2002US10667 20020403 (PCT/WO US0210667)

Priority Application: WO 2001US10904 20010404; WO 2001US12369 20010416;

US 2001879820 20010611; US 2001898758 20010629; WO 2001US30744 20011001

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI

SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 16992

English Abstract

A building structure offset uses hexagon structures (7) assembled in an offset layering architecture to construct walls, floors, and roofs. Hexagon building structures (7) include interior panels (1) adhered to both sides of a foam core (3). The structures (7) also include radial cutouts (6) for offset layering assembly with another structure (7). Peg retainers (5) selectively secure the hexagon building structures (7) together. Fastening holes (4) provide fastener locations for screwing or bolting through the layers of the hexagon structures (7). The holes (4) align with an offset layer of hexagon when assembled in the axial direction. Conduit holes (12) are selectively located depending on the fastening technique selected. The system includes five derivatives of hexagon building structures (7) and a header, providing square, triangular, and curved geometries when assembled. Since hexagon buildings are built from hexagon building structures (7) without customization, hexagon buildings can be rebuilt, modified, or recycled using the same materials.

Fulltext Availability: Detailed Description

Detailed Description

... and 436b together eliminating the need for conduit rod 415 insertion. Figure 79 provides flexible **rod extensions** 440 out of hexagon assemblies in FIGURE 77 and 78 for roof tarps 441, **sports** net attachments, wide rain collection, and **extensions** for cable attachment or insertion into conduits. These roof tarps can be layered for insulation...  
...growth buildings or sun rooms. Flexible solar voltaic films are also available to attach to **rods**. Reflective polymers are available in a wide range of plastics, however polyimide materials are preferred... applications for SRC CPI and CP2 include integration of electric circuits in a flexible film, **inflatable structure** for reducing from vibration and increasing insulation quality with air or other gases like argon to build **inflatable structures** that attach to the hexagon structure. SRS's films polyimide thin films that are clear...

19/6/1 (Item 1 from file: 348)

01710280

Autonomous stratospheric airship

19/6/7 (Item 4 from file: 349)

01054322

DELIVERY ASSEMBLY FOR USE IN SURGERY

19/6/10 (Item 7 from file: 349)

01007562 \*\*Image available\*\*

AIR-FLOW CONTAINMENT AND DISTRIBUTION ASSEMBLY

19/6/12 (Item 9 from file: 349)

00908137 \*\*Image available\*\*

INFLATABLE NEURAL PROSTHESIS

19/6/13 (Item 10 from file: 349)  
00908083 \*\*Image available\*\*  
**INFLATABLE NEURAL PROSTHESIS**

19/6/14 (Item 11 from file: 349)  
00766886 \*\*Image available\*\*  
**IMPROVED SYSTEM FOR TREATING MEAT**

19/6/15 (Item 12 from file: 349)  
00201414  
**LONG-HAUL VEHICLE STREAMLINE APPARATUS**

19/6/16 (Item 13 from file: 349)  
00141686 \*\*Image available\*\*  
**VENTING VALVE APPARATUS**

19/3,AB/4 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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01093211

**PRESSURIZABLE STRUCTURES COMPRISING DIFFERENT SURFACE SECTIONS**  
**STRUCTURES PRESSURISABLES PRESENTANT DIFFERENTES SECTIONS DE SURFACES**

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Patent and Priority Information (Country, Number, Date):

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Priority Application: WO 2002NL534 20020808

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AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ (utility model) CZ DE (utility model) DE DK (utility model) DK DM  
DZ EC EE (utility model) EE ES FI (utility model) FI GB GD GE GH GM HR HU  
ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX  
MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK (utility model) SK SL TJ TM TN  
TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 5812

English Abstract



The invention relates to composite pressurizable structures which are overwound with fibres or are braided. The pressurizable structures comprise axial sections which in turn comprise both concave and convex surfaces. The shape characteristics are related to geodesic as well as non-geodesic trajectories in regard of the fibres. Axial sections of the pressurizable structures can be rotated, expanded or bended with respect to the longitudinal axis of the pressurizable structure. Examples of uses of the pressurizable structure relate to pressure vessels and flexible pipelines, spring elements, robotic actuators and adaptable buildings. In another aspect, the invention relates to a method of production by means of braiding, which in principle allows for the construction of very large structures.

Fulltext Availability: Detailed Description

19/3,AB,K/11 (Item 8 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00976284

**CONFIGURABLE INFLATABLE SUPPORT DEVICES**

**DISPOSITIFS SUPPORTS PNEUMATIQUES CONFIGURABLES**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200305861 A1 20030123 (WO 0305861)

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Priority Application: US 2001304274 20010710; US 2002374403 20020422

Designated States:

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prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 12418

English Abstract

A configurable, adjustable **inflatable device** including one or more inflatable bladders (42) and a shape-defining membrane (44) that combines with the inflatable bladders (42) such that an overall shape of the configurable **inflatable device** is at least partially controlled by the shape-defining membrane, and wherein the overall shape of the configurable inflatable device is substantially different from an inflated shape of inflatable bladders alone. The configurable adjustable inflatable device may include a covering layer (66) that may partially or completely surround the inflatable bladders and may attach to the membrane (44) or the inflatable bladders (66). The level of inflation of the inflatable bladders (66) may also be controlled, further adding to

the adjustability of the inflatable device.  
Fulltext Availability: Detailed Description  
Detailed Description

... a variety of configurable structures may be obtained using a single inflatable bladder. Furthermore, the **inflatable structures** may be further adjustable and configurable by controlling the degree of inflation of the inflatable...

...inflatable bladders equipped with a self-sealing valve, as discussed above, by manipulating the hanger **arm** of the valve, the firmness (degree of inflation) of the inflatable bladder may be controlled, which may in turn partially control the shape and utility of the **inflatable structure**. The above description is therefore by way of example only, and includes any modifications and...